Reviewer’s report

Title: QL4MDR: A GraphQL Query Language for ISO 11179-based Metadata Repositories

Version: 1 Date: 18 Jan 2019

Reviewer: Julian Varghese

Reviewer’s report:

Most of my comments have been addressed. The motivation and the focus of the work is now much clearer and the added figure 1 is helpful to illustrate the key motivation.

I still have two rather minor issue to be addressed in the manuscript:

1) The authors state that less queries are needed for GraphQL-based vs REST-API-based requests and provide Figure 3 as illustration, which I think is trivial but still too theoretical. Though I understand that Graph-QL is more precise than REST, which can lead to overfetching and therefore also to performance issues, many readers who are not familiar with GraphQL queries will hardly understand this benefit.

Would the authors please provide a tangible query example involving one or two typical and actually relevant queries where Graph-QL query exemplifies its superiority compared to simple REST request?

2) There should be more information what other and future MDR need to implement to enable this envisioned idea of federated queries, what are the efforts/hurdles?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal