

## Author's Response To Reviewer Comments

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Reviewer reports (see cover letter for figure added):

Response: We thank the editors and referees for the comments and for their time dedicated to this manuscript.

Editor:

Your manuscript "Transcriptome annotation in the cloud: complexity, best practices and cost." (GIGA-D-20-00202R1) has been assessed again by our re-reviewers. Based on these reports, and my own assessment as Editor, I am pleased to inform you that it is potentially acceptable for publication in GigaScience, once you have carried out some final very minor revisions suggested by our re-reviewers. We require code and test data snapshots in our GigaDB repository and I've cc'd our curators to help you with this. As you discuss a CWL workflow I'd suggest including this as a figure and linked to the permalink in the legends so readers can interact with it:

[https://view.commonwl.org/workflows/github.com/ncbi/cloud-transcriptome-annotation/blob/master/bin/cwl-ngs-workflows-cbb/workflows/Annotation/transcriptome\\_annotation.cwl](https://view.commonwl.org/workflows/github.com/ncbi/cloud-transcriptome-annotation/blob/master/bin/cwl-ngs-workflows-cbb/workflows/Annotation/transcriptome_annotation.cwl)

Response: We added a new paragraph and a new figure 3 to the manuscript with the workflow schema and the interactive link was added to the figure caption like:

Figure 3 shows the scheme of the transcriptome annotation workflow used in this study, interactive link is available in the caption of the figure.

Figure 3: Transcriptome Annotation workflow schema,

[https://view.commonwl.org/workflows/github.com/ncbi/cloud-transcriptome-annotation/blob/master/bin/cwl-ngs-workflows-cbb/workflows/Annotation/transcriptome\\_annotation.cwl](https://view.commonwl.org/workflows/github.com/ncbi/cloud-transcriptome-annotation/blob/master/bin/cwl-ngs-workflows-cbb/workflows/Annotation/transcriptome_annotation.cwl)

Reviewer #1: I appreciate the authors' responses to the reviewer comments and their improvements in the manuscript. Overall, I do not find any further critical issues to be solved in the content. Below are a few minor suggestions:

### 1. Pricing of cloud usage:

Both AWS and GCP officially announces that they continue their efforts to reduce the computing cost regularly. It would be better to mention that the pricing of cloud instances may change in the future as well as the instance selections, and that may lead to the change of the study's conclusion. Table 1 also should have information about the date and the region.

Response: We added two columns (Region and Last used Date) to Table 1 as recommended by the referee. WE also modified the Table caption to:

Table 1: Machine types with resources in each cloud. Prices and instance type may change in the future as is common practice of cloud providers

### 2. The container image registry

In the experiments with both vendors, the authors used the same docker image hosted in the Google Container Registry. It means that the GCP has an advantage in the transfer of the container image, which may take some time during the instance setup. It would be fair to mention it or mention that the pulling time too short to be worth consideration.

Response: We agreed with the referee that we should mention that the docker image was hosted in the Google Container Registry. However, this fact does not represent any limitation for AWS as the download of the image don't affect the performance of AWS instances. We added these sentences to the Result and Discussion section:

The AWS platform is more efficient than the GCP during the instance creation, setup and release, see Figure 4b. This step is only 0.1% of the total cost despite the docker image used in the study being

hosted in the Google Container Registry.

I am looking forward to the publication of this manuscript, which may give many insights into practical cloud usage to the readers.

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