Reviewer Report

Title: Sharing interoperable workflow provenance: A review of best practices and their practical application in CWLProv

Version: Revision 1 **Date:** 6/20/2019

Reviewer name: Tomoya Tanjo, Ph.D.

Reviewer Comments to Author:

In this paper the authors summarize best-practice recommendations on retrospective provenance from existing literature and define a set of levels of provenance and resource sharing by using summarized recommendations. Based on this result, they propose CWLProv to achieve retrospective provenance by utilizing open standard formats. Experimental results for several workflows show that CWLProv enables workflows reproducible on different workflow engines and on different operating systems.
Their summarized recommendation and proposed set of levels of provenance are quite interesting because they can be a good basis to know how easily our workflow execution results can be shared with others and also to discuss the reproducibility of our execution results.
The paper is easy to read and well structured.
Here is a minor thing to be addressed.
- p.2: The first paragraph: The term `WMS` is used before introducing `Workflow Management System` that is introduced in the fourth paragraph in p.2.

Methods

Are the methods appropriate to the aims of the study, are they well described, and are necessary controls included? Choose an item.

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