Accepted Manuscript

Cloud infrastructure provenance collection and management to reproduce scientific workflows execution

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PII: S0167-739X(17)31491-7
DOI: http://dx.doi.org/10.1016/j.future.2017.07.015
Reference: FUTURE 3545

To appear in: *Future Generation Computer Systems*

Received date : 15 November 2016
Revised date : 10 June 2017
Accepted date : 5 July 2017

Please cite this article as: K. Hasham, K. Munir, R. McClatchey, Cloud infrastructure provenance collection and management to reproduce scientific workflows execution, *Future Generation Computer Systems* (2017), http://dx.doi.org/10.1016/j.future.2017.07.015

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Highlights

- The Reproduce Scientific Workflow Execution using Cloud-Aware Provenance (ReCAP) framework enables cloud infrastructure provenance collection and management to reproduce scientific workflows execution
- The developed mapping approaches aid in capturing the Cloud-aware provenance information and help in re-provisioning the execution resource on the Cloud with similar configurations
- Experimental evaluation shows the impact of different resource configurations on the workflow execution performance and justifies the need for collecting such provenance information in the context of Cloud
- The proposed mapping mechanisms do not affect the workflow execution performance
- The Cloud-aware provenance can be used to re-provision similar execution resources on Cloud

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