Peak2Cloud: Scientific Computing in the Cloud

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***Abstract*—Peak2Cloud (P2C) is an Openstack-based private cloud deployed as testbed for scientific computing. We present how P2C was setup, configured, and tested. We also describe vcluster, a tool for rapidly deploying message-passing clusters on P2C. Finally, we show and analyze some benchmark results on the message-passing performance of virtual clusters deployed on P2C.**

***Index Terms*—cloud computing, scientific computing, message passing**

I. Introduction

CLOUD computing is becoming a popular choice for deploying online services. [1]

II. Previous Work

text text text text text text text text text text text text text text text[2]

A. subsection

B. another subsection

III. Methodology

Theorem 1 (Theorem name)**.** *For a named theorem or theorem-like environment you need to insert the name through* Insert▷ Short Title*, as done here.*

Lemma 2. *If you don't want a theorem or lemma name don't add one.*

Proof: And here's the proof! ■

IV. Results

A single column figure goes here

Figure 1. Captions go *under* the figure

Table I
TABLE CAPTIONS GO *above* THE TABLE

delete	this
example	table

V. Conclusions

bla bla

Appendix A
First appendix

Citation:

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Appendix B
Second appendix

Acknowlegment

Many thanks to the reviewers as well as to ICS.

References

[1] A. Iosup, S. Ostermann, M. N. Yigitbasi, R. Prodan, T. Fahringer, and D. H. J. Epema, "Performance analysis of cloud computing services for many-tasks scientific computing," *IEEE Transactions on Parallel and Distributed Systems*, vol. 22, no. 6, pp. 931–945, Jun. 2011. [Online]. Available: http://ieeexplore.ieee.org/lpdocs/epic03/wrapper.htm?arnumber=5719609

[2] M. Bourguiba, K. Haddadou, I. E. Korbi, and G. Pujolle, "Improving network I/O virtualization for cloud computing," *IEEE Transactions on Parallel and Distributed Systems*, vol. 25, no. 3, pp. 673–681, Mar. 2014. [Online]. Available: http://ieeexplore.ieee.org/lpdocs/epic03/wrapper.htm?arnumber=6463393

Joseph Anthony C. Hermocilla obtained his MS in Computer Science from the University of the Philippines Los Banos where he is currently an assistant professor at the Institute of Computer Science and head of the Systems Research Group. His research interests span the area of systems, including operating systems, computer architecture, data communications and networking, distributed systems, computer security, and high-performance computing. He is a member of the Computing Society of the Philippines and the Philippine Society of Information Technology Educators.

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