

Cloud Computing Security Problem Analysis

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I. INTRODUCTION

A common understanding of “cloud computing” is continuously evolving, and the terminology and concepts used to define it often need clarifying. Press coverage can be vague or may not fully capture the extent of what cloud computing entails or represents, sometimes reporting how companies are making their solutions available in the “cloud” or how “cloud computing” is the way forward, but not examining the characteristics, models, and services involved in understanding what cloud computing is and what it can become. This white paper introduces internet-based cloud computing, exploring the characteristics, service models, and deployment models in use today, as well as the benefits and challenges associated with cloud computing. Also discussed are the communications services in the cloud (including ways to access the cloud, such as web APIs and media control interfaces) and the importance of scalability and flexibility in a cloud-based environment. Also noted for businesses desiring to start using communication services, are the interface choices available, including Web 2.0 APIs, media control interfaces, Java interfaces, and XML based interfaces, catering to a wide range of application and service creation developers.

REFERENCES

- [1]. Peter Mell, and Tim Grance, "The NIST Definition of Cloud Computing," 2009, <http://www.wheresmyserver.co.nz/storage/media/faq-files/cloud-def-v15.pdf>, Accessed April 2010.
- [2]. Frank Gens, Robert P Mahowald and Richard L Villars. (2009, IDC Cloud Computing 2010.
- [3]. IDC, "IDC Ranking of issues of Cloud Computing model," ed, 2009, <http://blogs.idc.com/ie/?p=210>, Accessed on July 2010.
- [4]. Cloud Computing Use Case Discussion Group, "Cloud Computing Use Cases Version 3.0," 2010.
- [5]. ENISA, "Cloud computing: benefits, risks and recommendations for information security," 2009, <http://www.enisa.europa.eu/act/rm/files/deliverables/cloud-computing-risk-assessment>, Accessed On July 2010.
- [6]. Cloud Security Alliance (CSA). (2010). Available: <http://www.cloudsecurityalliance.org/>
- [7]. Balachandra Reddy Kandukuri, Ramakrishna Paturi and Atanu Rakshit, "Cloud Security Issues," in Proceedings of the 2009 IEEE International Conference on Services Computing, 2009, pp. 517-520.
- [8]. Kresimir Popovic, Zeljko Hocenski, "Cloud computing security issues and challenges," in The Third International Conference on Advances in Human-oriented and Personalized Mechanisms, Technologies, and Services, 2010, pp. 344-349.
- [9]. Meiko Jensen, Jörg Schwenk, Nils Gruschka and Luigi Lo Iacono, "On Technical Security Issues in Cloud Computing," in IEEE ICC, Bangalore 2009, pp. 109-116.
- [10]. Bernd Grobauer, Tobias Walloschek and Elmar Stöcker, "Understanding Cloud- Computing Vulnerabilities," IEEE Security and Privacy, vol. 99, 2010.
- [11]. S. Subashini, Kavitha, V., "A survey on security issues in service delivery models of cloud computing," Journal of Network and Computer Applications, vol. In Press, Corrected Proof.
- [12]. Thomas Ristenpart, Eran Tromer, Hovav Shacham, Stefan Savage, "Hey, you, get off of my cloud: exploring information leakage in third-party compute clouds," presented at the Proceedings of the 16th ACM conference on Computer and communications security, Chicago, Illinois, USA, 2009.
- [13]. Microsoft. (2006, October, 2010). Multi-Tenant Data Architecture. Available: <http://msdn.microsoft.com/en-us/library/aa479086.aspx>
- [14]. Amazon. October, 2010). Amazon EC2 SLA. Available: <http://aws.amazon.com/ec2-sla/>