

Journal of Computers

Special Issue on Cloud Security

FOREWORD

With the great development of cloud computing, security problems had received much attention from researchers. In general, cloud security refers computer security, network security, and information security. This special issue concentrates on the technologies to protect data, applications, and the associated infrastructure of cloud computing. Some optimization problems and distributed computing problems are also included in this special issue. In recent years, a lot of researchers paid their attention to several topics of cloud security and proposed many mechanisms in [1–15]. The objective of this special issue is to review the related research and development of technologies by putting together a collection of papers concerning the relevant topics of cloud security. We wish this special issue can provide a good starting point for individuals who have the interest to enter this research area.

This special issue includes five papers from five different topics: the security of virtual machine, network security, the security of architecture, optimization problem, and MapReduce assisted technology. The contributors are Dr. Jing Bai, Dr. Kuo-Kun Tseng, Dr. Yu-Yi Chen, Dr. Gao-Wei Yan, and PhD candidate Ming-Tai Wu. All these papers were selected by the editorial committee from a large quality of outstanding submissions after the careful review process. On behalf of the editorial committee, I would like to express my gratitude to all contributing authors and reviewers. I am also grateful to all members of the editorial committee for their excellent contributions.

Jeng-Shyang Pan Guest Editor
Professor
Department of Electronic Engineering
National Kaohsiung University of Applied Sciences
Kaohsiung 807, Taiwan, R.O.C.
Email: jspan@cc.kuas.edu.tw

Tsu-Yang Wu Guest Co-Editor
Doctor
School of Computer Science and Technology,
Shenzhen Graduate School, Harbin Institute of
Technology, Shenzhen 518055, China
E-mail: wutsuyang@gmail.com

References

- [1] F. Lombardia, R. D. Pietrob, Secure virtualization for cloud computing, *Journal of Network and Computer Applications*, Vol. 34 (4), pp. 1113–1122, 2011.
- [2] Z. Wan, J. Liu, R. H. Deng, HASBE: A hierarchical attribute-based solution for flexible and scalable access control in cloud computing, *IEEE Transactions on Information Forensics and Security*, Vol. 7 (2), pp. 743–754, 2012.
- [3] B. R. Chang, C. F. Huang, H. F. Tsai, Z. Y. Lin, Rapid access control on ubuntu cloud computing with facial recognition and fingerprint identification, *Journal of Information Hiding and Multimedia Signal Processing*, Vol. 3 (2), pp. 176–190, 2012.
- [4] A. Beloglazova, J. Abawajyb, R. Buyyaa, Energy-aware resource allocation heuristics for efficient management of data centers for cloud computing, *Future Generation Computer Systems*, Vol. 28 (5), pp. 755–768, 2012.
- [5] S. K. Sood, A combined approach to ensure data security in cloud computing, *Journal of Network and Computer Applications*, Vol. 35 (6), pp. 1831–1838, 2012.
- [6] J. Espadasa, A. Molinab, G. Jiménez, M. Molinab, R. Ramírez, D. Conchaa, A tenant-based resource allocation model for scaling Software-as-a-Service applications over cloud computing infrastructures, *Future Generation Computer Systems*, Vol. 29 (1), pp. 273–286, 2013.
- [7] A. Patela, M. Taghavia, K. Bakhtiyaria, J. C. Júnior, An intrusion detection and prevention system in cloud computing: A systematic review, *Journal of Network and Computer Applications*, Vol. 36 (1), pp. 25–41, 2013.
- [8] M. Green, The threat in the cloud, *IEEE Security & Privacy*, Vol. 11 (1), pp. 86–89, 2013.
- [9] H. Zhu, T. Liu, D. Zhu, and H. Li, Robust and simple N-party entangled authentication cloud storage protocol based on secret sharing scheme, *Journal of Information Hiding and Multimedia Signal Processing*, Vol. 4 (2), pp. 110–118, 2013.
- [10] R. Jhavar, V. Piuri, M. Santambrogio, Fault tolerance management in cloud computing: A system-level perspective, *IEEE Systems Journal*, Vol. 7 (2), pp. 288–297, 2013.
- [11] G. Aceto, A. Botta, W. de Donato, A. Pescapè, Cloud monitoring: A survey, *Computer Networks*, Vol. 57 (9), pp. 2093–2115, 2013.
- [12] B. R. Chang, H. F. Tsai, C. M. Chen, Evaluation of virtual machine performance and virtualized consolidation ratio in cloud computing system, *Journal of Information Hiding and Multimedia Signal Processing*, Vol. 4 (3), pp. 192–200, 2013.
- [13] J. Yu, P. Lu, Y. Zhu, G. Xue, M. Li, Toward secure multikeyword top-k retrieval over encrypted cloud data, *IEEE Transactions on Dependable and Secure Computing*, Vol. 10 (4), pp. 239–250, 2013.
- [14] B. Addis, D. Ardagna, B. Panicucci, M. S. Squillante, L. Zhang, A hierarchical approach for the resource management of very large cloud platforms, *IEEE Transactions on Dependable and Secure Computing*, Vol. 10 (5), pp. 253–272, 2013.
- [15] C. Papagianni, A. Leivadeas, S. Papavassiliou, A cloud-oriented content delivery network paradigm: modeling and assessment, *IEEE Transactions on Dependable and Secure Computing*, Vol. 10 (5), pp. 287–300, 2013.