

International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

Volume 3, Issue 2, January 2023

Data Security and Privacy in Cloud Computing

Mr. Pradeep Nayak¹, Ravindra Reddy², Suraj S Ankolekar³, Mohan Raju V⁵, C H Rakesh⁵

Assistant Professor, Department of Information Science and Engineering⁴ Students, Department of Information Science and Engineering^{1,2,3,5} Alva's Institute of Engineering and Technology, Mijar, Mangalore, Karnataka, India

Abstract: Information technology has frequently faced serious problems with data security. Because the data is dispersed throughout the globe in the cloud computing environment, it becomes especially serious. The two main reasons users have privacy and data security concerns with cloud technology are data security and privacy protection. Data security and privacy protection are becoming more crucial for the future growth of cloud computing technology in government, industry, and business, even if numerous techniques on the issues of cloud computing have been researched in both academics and industries. Both the hardware and the software in the cloud architecture are affected by difficulties with data security and privacy protection. This study intends to improve data security and privacy protection for a reliable cloud environment by reviewing various security strategies and difficulties from both software and hardware sides for securing data in the cloud. We conduct a comparative research analysis of the literature related to the data security and privacy protection methods utilised in cloud computing in this paper.

Keywords: Cloud computing, privacy, SaaS, PaaS, IaaS, data security

REFERENCES

- [1]. N. Leavitt, "Is cloud computing really ready for prime time?" Computer, vol. 42, no. 1, pp. 15–25, 2009.
- [2]. P. Mell and T. Grance, "The nist definition of cloud computing," National Institute of Standards and Technology, vol. 53, no. 6, article 50, 2009.
- [3]. F. Berman, G. Fox, and A. J. G. Hey, Grid Computing: Making the Global Infrastructure a Reality, Volume 2, John Wiley and sons, 2003.
- [4]. M. A. Shah, R. Swaminathan, and M. Baker, "Privacy-preserving audit and extraction of digital contents," IACR Cryptology EPrint Archive, vol. 186, 2008.
- [5]. Z. Xiao and Y. Xiao, "Security and privacy in cloud computing," IEEE Communications Surveys & Tutorials, vol. 15, no. 2, pp. 843–859, 2013.
- [6]. N. Kshetri, "Privacy and security issues in cloud computing: the role of institutions and institutional evolution," Telecommunications Policy, vol. 37, no. 4-5, pp. 372–386, 2013.
- [7]. R. Latif, H. Abbas, S. Assar, and Q. Ali, "Cloud computing risk assessment: a systematic literature review," in Future Information Technology, pp. 285–295, Springer, Berlin, Germany, 2014.
- [8]. A. Avizienis, J. Laprie, B. Randell, and C. Landwehr, "Basic [×] concepts and taxonomy of dependable and secure computing," IEEE Transactions on Dependable and Secure Computing, vol. 1, no. 1, pp. 11–33, 2004.
- [9]. Z. Mahmood, "Data location and security issues in cloud computing," in Proceedings of the 2nd International Conference on Emerging Intelligent Data and Web Technologies (EIDWT '11), pp. 49–54, IEEE, September 2011.
- [10]. D. Sun, G. Chang, L. Sun, and X. Wang, "Surveying and analyzing security, privacy and trust issues in cloud computing environments," in Proceedings of the International Conference on Advanced in Control Engineering and Information Science (CEIS '11), pp. 2852–2856, chn, August 2011.
- [11]. A. Pandey, R. M. Tugnayat, and A. K. Tiwari, "Data Security Framework for Cloud Computing Networks," International Journal of Computer Engineering & Technology, vol. 4, no. 1, pp. 178–181, 2013.
- [12]. D. A. Klein, "Data security for digital data storage," U.S. Patent Application 14/022,095, 2013.