

Title: An Experimental Validation of Public Cloud Mobile Banking

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Outlet: Research Journal of Applied Sciences, Engineering and Technology (Thomson ISI, Scopus), (In Press), 2014.

Abstract: Currently, financial institutions incur huge expenditure to implement and maintain mobile banking (m-Banking) solutions, and this cost is bound to rise significantly, as more customers subscribe to m-Banking services. Cloud computing has potential to facilitate reduced cost, high scalability, and a variable cost structure that could guarantee cheaper, reliable, and sustainable m-Banking in the long term. While the adoption of organizational private clouds seems natural for banks because of the sensitive nature of banking transactions, some have argued for the adoption of public clouds as a better alternative, despite concerns on issues such as trust, security, and privacy. However, there is lack of sufficient empirical evidence in the literature on the suitability of public clouds for m-Banking. Hence, this paper presents an investigation of the use of public cloud for m-Banking. A prototype cloud-based m-Banking application was developed using a public platform-as-a-service (Paas) cloud model, which was evaluated for usability and robustness in a controlled experiment. The evaluation result shows that m-Banking on public cloud is viable, if the cloud-based application is sufficiently robust, and usable. The result also indicates that m-Banking services on public cloud are suitable for adoption by the banking industry.