Survey on Middleware Systems in Cloud Computing Integration

Jonathan A.P. Marpaung*, Mangal Sain*, Hoon-Jae Lee*

*Cryptography & Network Security Lab, Dongseo University

San 69-1, Jurye 2-dong, Sasang-gu, Busan 617-716, Korea

jonathan@spentera.com, mangalsain1@gmail.com, hjlee@dongseo.ac.kr

Abstract— **Cloud computing is an increasingly attractive solution to providing cheap, scalable, and easy to deploy computing services. This paper presents a survey on the middleware technology used to integrate different cloud platforms/services, applications running in the cloud, and the cloud with on-premise data centers. We discuss the ongoing research projects and solutions being developed such as Altocumulus, AppScale, Cloudify, and mOSAIC. We analyze the features already available in current solutions as well as the future technology and standards needed to ensure seamless integration and more widespread adoption of cloud computing solutions.**

Keyword— **Cloud computing, Middleware, Integration**

Jonathan A.P. Marpaung Jonathan completed his Bachelor of Computer Science at the University of Indonesia in 2010 with his undergraduate thesis titled Application of L7-filter for Netfilter/Iptables Firewall. He worked at several Jakarta based information security companies implementing SIEM systems and conducting vulnerability assessments, before commencing his master's at Dongseo University in 2011. His research current interest is malware development and side channel attacks on hardware cryptodevices.
.