Declarative Policy Support for Cloud Application Orchestration

Kena Alexander*, Choonwha Lee**, Seungmok Chai*

*Division of Computer Science and Engineering, Hanyang University, Seoul, Republic of Korea kenaxle@hanyang.ac.kr, lee@hanyang.ac.kr, blaine@hanyang.ac.kr

Abstract— The orchestration of applications and components in the Cloud is a topic that has been receiving notable attention. As the use and number of cloud computing platforms increases, the need for a standardized means of describing, deploying and managing applications across heterogeneous providers becomes even more apparent. To meet this need we present an extended CAMP platform, capable of describing, deploying and managing applications and components across heterogeneous clouds. Our platform makes use of policies that are described in a declarative YAML format. In order to process policies defined in our extended platform we also present declarative policy directives that specify actions that may be taken in response to our policies. Our extensions to CAMP will allow CAMP compliant platforms to be capable of performing orchestration through the use of declarative policy descriptions, automatically orchestrating applications and components across heterogeneous cloud providers.

Keyword—OASIS CAMP, Orchestration, Policies, Policy Management



(Kena Alexander is a M.S. student at Hanyang University, Seoul South Korea. He received his B.S. in Computer Science from The University of the West Indies, St Augustine, Trinidad and Tobago in 2005. His research areas are cloud application orchestration and intercloud portability and management.



Choonhwa Lee is an associate professor in the Division of Computer Science and Engineering at Hanyang University, Seoul, South Korea. He received his B.S. and M.S. degrees in computer engineering from Seoul National University, South Korea, in 1990 and 1992, respectively, and his Ph.D. degree in computer engineering from the University of Florida, Gainesville, in 2003. His research interests include cloud computing, peer-to-peer and mobile networking and computing, and services computing technology.



Seungmok Chai is a student at Hanyang University, Seoul, South Korea. His research interests include cloud and distributed computing systems and computer networking protocols.