Adaptive multi-tenancy policy for enhancing service level agreement through resource allocation in cloud computing

ABSTRACT

The appearance of infinite computing resources that available on demand and fast enough to adapt with load surges makes Cloud computing favourable service infrastructure in IT market. Core feature in Cloud service infrastructures is Service Level Agreement (SLA) that led seamless service at high quality of service to client. One of the challenges in Cloud is providing heterogeneous computing services for the clients. With the increasing number of clients/tenants in the Cloud, unsatisfied agreement is becoming a critical factor. In this paper, we present an adaptive resource allocation policy which attempts to improve accountable in Cloud SLA while aiming for enhancing system performance. Specifically, our allocation incorporates dynamic matching SLA rules to deal with diverse processing requirements from tenants. Explicitly, it reduces processing overheads while achieving better service agreement. Simulation experiments proved the efficacy of our allocation policy in order to satisfy the tenants; and helps improve reliable computing.