A feedback based prediction model for real time workload in a cloud

Abstract

Most of the distributed systems such as a cloud environment have a nondeterministic structure, and it would cause a serious problem to perform tasks with a time limit. Therefore, many prediction models and performance analyzes being used in the cloud to determine environment for users. Nevertheless, most of these models have a single objective for optimal resource absorption. Which means, they considered just one objective, such as a time limit and other issues are overlooked. In this paper, we proposed a novel model in Cloud to determine environment for the real-time workload. We applied a multi-objective model to absorb optimal resources under reasonable user cost and maximum user sharing. Performance evaluation on CloudSim proves that the new approach outperforms other existing, state-of-the-art methods.