Abstract

Request assignment with compute nodes in a large scale distributed computing environment is a challenging research area. To devise a fitting solution, need to identify the impacting parameters and pertinent constraints originating from such an environment. This paper introduces a novel method that helps to ascertain the level of influence of each parameter among the set of parameters of cloud configurations. This work used conjoint analysis, a mathematical statistical method for enumerating the impact level of the parameters. After identifying the most influencing parameter, this work used Z-Score statistical method to quantify the capacity of the compute node into the unit of percentage. Based on this percentage split-off, the users’ requests are assigned to the compute nodes. Thus the nodes are assigned to the requests based on their capacity proportion. The focus of this paper is to present the method of conducting conjoint analysis for the virtual machines’ configuration in cloud. This work is the first attempt that applies conjoint analysis for identifying the impact level of parameters in the cloud architectures.
References


Index Terms

Computer Science
Programming Language

Keywords

Cloud computing Conjoint analysis Part-worth utility Z-score