

A load balancing strategy for reducing data loss risk on cloud using remodified throttled algorithm

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Article Info

Article history:

Received May 14, 2021

Revised Dec 17, 2021

Accepted Jan 10, 2022

Keywords:

Cloud computing
Load balancing
Resource utilization
Response time
Time utilization

ABSTRACT

Cloud computing always deals with new problems to fulfill the demand of the challenging organizations around the whole world. Reducing response time without the risk of data loss is a very critical issue for the user requests on cloud computing. Load balancing ensures quick response of virtual machine (VM), proper usage of VMs, throughput, and minimal cost of VMs. This paper introduces a re-modified throttled algorithm (RTMA) that reduces the risk of data hampering and data loss considering the availability of VM which increases system's performance. Response time of virtual machines have been considered in our work, so that when migration process is running, data will not be overflowed in the VMs. Thus, the data migration process becomes high and reliable. We have completed the overall simulation of our proposed algorithm on the cloud analyst tool and successfully reduced the risk of data loss as well as maintains the response time.

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1. INTRODUCTION

Cloud computing is the on-demand topic of modern science. A grate number of computing resources including physical and virtual resources are shared across the network and on demand applications are served according to the request of user. Cloud can be public, private and hybrid and each type have four layers for providing different services according to the needs of user on request by 24/7. In each layer a number of challenges are associated with each layer like security, cost management and containment, managing distributed clouds, performance, load balancing, resource allocation and so on.

Individual user, many small and large organization, important sectors are getting attached with the cloud for its overall performance, and load balancing is the most critical part for improving performance. Load balancing performs its execution by balancing the loads into different computing resources and datacenters. An important goal of load balancing is making quick response time, processing time, cost and maximize overall performance. Previous algorithms deal with the response time, and processing time. Without considering the present resources risk at the virtual machine. Resources risk while task migration, such as data loss, and data hampering, should need to be considered which was absent in the previous algorithms.