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A cloud agent for early warning of SLA violation

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The activity of effective resource allocation in cloud computing is concerned with optimal distribution of the virtual machines (VMs) on various hosts to meet the required consumers' tasks. Quality of Services (QoS) is the measurable KPIs for cloud providers to monitor and manage their resources and services. Control chart can be used to analyze the past and current resource consumptions in VMs, hosts and data centers to predict the possible failings in meeting the required QoS. We propose a cloud agent with a knowledge base that applies the quality control method to analyze and detect the possible violation of service level agreement (SLA) in real time and to mitigate the overloading by rescheduling and redistributing the resources with a proposed resource distribution algorithm. The proposed mechanism allows the cloud providers to have early warning of possible non-complying with the required SLA.

Biography

Jen-Hsiang Chen is a faculty member of Information Management Department from Shih Chien University, Kaohsiung, Taiwan.

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