Abstract

Various communication and computing tasks in the fields can be integrated and applied in a
distributed system. However, those resources are heterogeneous and dynamic in nature,
connecting a broad range of resources. This study proposed a hybrid load balancing policy to
maintain performance and stability of distributed system in Mobile services. Proposed work
suggests to opt the use of some of advanced and efficient technologies like Multiagent. In this
proposed implementation a two models are developed. The worker model is used to describe
the workload and its current distribution within the system. The master model defines for a given
algorithm at any instant of time and shows the formal context for obtaining and evaluating the
load distribution decisions. Multiagent computing on a cluster of workstations is widely
envisioned to be a powerful paradigm for building useful distributed applications. The Mobile
agents of the system span across all the machines of a cluster. Just like the case of traditional
distributed systems. With different characteristics between ordinary processes and agents, it is
interesting and useful to investigate whether conventional load-balancing strategies are also
applicable and sufficient to cope with the newly emerging needs, such as coping with temporally
continuous agents, devising a performance metric for multi agent systems, and taking into
account the vast amount of communication and interaction among agent. This work discusses
the above issues with reference to agent properties and load balancing techniques and outlines
the space of load-balancing design choices in the arena of multi agent computing. The proposed algorithm works by associating a credit value with each agent. The credit of an agent depends on its affinity to a machine, its current workload, its communication behavior, and mobility. When a load imbalance occurs, the credits of all agents are examined and an agent with a lower credit value is migrated to relatively lightly loaded machine in the system. Proposed work consider the problem of load balancing to minimize the cost of dynamic computations, including the cost of migrations. We propose the Ripple load balancing paradigm, The load balancing service presented is a generic tool for enhancing performance of accessing distributed objects from the WAP interface.

Reference

Multi-agent Optimized Load Balancing Using Spanning Tree for Mobile Services


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