

## عنوان مقاله:

A Near Optimal Approach in Choosing The Appropriate Physical Machines for Live Virtual Machines Migration in Cloud Computing

## محل انتشار:

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## خلاصه مقاله:

Migration of Virtual Machine (VM) is a critical challenge in cloud computing. The process to move VMs or applications from one Physical Machine (PM) to another is known as VM migration. In VM migration several issues should be considered. One of the major issues in VM migration problem is selecting an appropriate PM as a destination for a migrating VM. To face this issue, several approaches are proposed that focus on ranking potential destination PMs by addressing migration objectives. In this paper we propose a new hierarchal fuzzy logic system for ranking potential destination PMs for a migrating VM by considering following parameters: Performance efficiency, Communication cost between VMs, Power consumption, Workload, Temperature efficiency and Availability. Using hierarchal fuzzy logic systems which consider the mentioned six parameters which have great role in ranking of potential destination PMs for a migrating VM together, the accuracy of PMs ranking approach is increased, furthermore the number of fuzzy rules in the system are reduced, thereby reducing the computational time (which is critical in cloud environment). In our experiments, we compare our proposed approach that is named as (HFLSRPM: Hierarchal Fuzzy Logic Structure for Ranking potential destination PMs for a migrating VM) with AppAware algorithm in terms of communication cost and performance efficiency. The results demonstrate that by considering more effective parameters in the proposed .PMs ranking approach, HFLSRPM outperforms AppAware algorithm

## کلمات کلیدی:

Cloud Computing, Hierarchal fuzzy logic structure, virtual machine migration

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