Abstract

The complex distributed environment is a major hindrance in the service delivery process as per the customer requirement. Provisioning resources with minimalist conflict and on-demand pay-per-use service has occupied the center stage of service computing in recent times. The paper tries to address the issue of resource provisioning in a dynamic environment by adopting a biologically inspired approach. Using a linear combination of two different models the paper elucidates strategies for allocation of resources in stable and volatile scenarios. Agent technology plays a key role in controlling the parameters for optimized allocation.

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**Index Terms**

Computer Science Distributed Computing

**Keywords**

Cloud computing Optimization Multi-agent Predator-prey Dynamics