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.

References

Resource Allocation Modeling in Abstraction using Predator-Prey Dynamics: A Qualitative Analysis


A. Ghose and H Khanh Dam: An agent-oriented approach to service analysis and design, PRIMA 2010


Andrés Pantoja and Nicanor Quijano: A Population Dynamics Approach for the Dispatch of Distributed Generators, IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, VOL. 58, NO. 10, Page 4559-4567 @2011


LIU Xiang: A Multi-Agent-Based Service-Oriented Architecture for Inter-Enterprise Cooperation System, Second International Conference on Digital Telecommunications (ICDT'07)


Bobby, Jostein, Shane, Jeff, Majid, Carly, Jay: Mathematical models of predator-prey systems, The Mathematics of Invasions in Ecology and Epidemiology @ May 15, 2009

. Netlogo is a model to explore predator-prey eco-system, developed by North-western University. http://ccl.northwestern.edu/netlogo/models/WolfSheepPredation

Index Terms

Computer Science Distributed Computing

Keywords

Cloud computing Optimization Multi-agent Predator-prey Dynamics

2 / 3