Abstract

The virtualization gives the power of partitioning the physical host into multiple virtual machines. We can manage the number of active host and their power consumption by migrating the virtual machines according to their resource requirement and current status on that particular host. Service level agreement is the main thing and essential one for giving the reliable quality of service between customers and the data centers. Live migration of the virtual machines managing the over load and under loaded host which gives the ability of dynamic resource allocation on another host. Dynamic virtual machine consolidation and switching off the idle host allow data centers to minimize the resource and power consumption.

The proposed technique will provide the ability of dynamic virtual machine consolidation using adaptive utilization threshold based on CPU usage prediction which can easily manage the high level of SLA and reduces the number of VM migrations in between the host. The validation of the proposed technique on multiple workload traces of the Planet lab servers.

References

- BP. Rimal, E. Choi, I. Lumb, A Taxonomy and, Survey of Cloud Computing Systems,
Live Migration of Virtual Machines in Cloud Environment using Prediction of CPU Usage


- VMware Inc. VMware distributed power management concepts and use, 2010.


Index Terms

Computer Science

Distributed Computing

Keywords

Virtualization resource utilization prediction live migration consolidation.