Abstract

Server Virtualization is a growing trend in almost all the critical IT infrastructures all over the world. Apart from the cost savings involved with such approach, it is even useful in increasing the infrastructure operational efficiency as it speeds up the operation, enhances the services availability and minimizes the downtimes. But it is actually worthless if the available resources are not well managed, that's why data center management is really crucial to ensure that the virtualization applied is beneficial. In this paper, we propose a new representation for the problem of finding the best allocation for the virtual machines on the physical hosts. We also compare the performance of four types of Genetic algorithms that were used to solve this problem. These are: Steady State (ssGA), Generational (genGA), Cellular (cGA) and distributed (dGA).

References

- McMahon, M. T. 1998. A Distributed Genetic Algorithm With migration for the design of composite laminate structures, in Computer Science and Applications, the Faculty of the Virginia Polytechnic Institute and State University: Blacksburg, Virginia.

Index Terms

Computer Science

Algorithms

Keywords

Virtualization  Cellular Genetic Algorithms  Distributed Resource Scheduling