Abstract

Nowadays, the function of Information Technology in environmental problem is getting more deliberation than ever. Some of the major concerns today over IT are increasing energy charges, older equipments stored in storage space and landfills, global warming, etc. To decrease the major environmental problem, a new term called Green IT is introduced. A Green IT is a term which is developed to illustrate the construction, administration, use and removal of IT in a way that minimizes damage to the environment. The most important purpose following the majority of eco-friendly business initiatives, including Green IT, is to encourage environmental sustainability. So, to make the environment more eco-friendly, our research project was aiming in reducing E-waste accumulated by computers. We look forward for a Green IT environment. At present, we can see that old-range and mid-range of processors are thrown out before their life-time expiry date. This contributes for E-waste accumulation and its one of the world’s most dangerous situations to come. We thought about a novel architecture that supports accommodating (emulation) this old-range and mid-range processors together with modern high-end processors in the scenario of cloud computing. Through this architecture, we can use all processors depends on various applications till their expiry date, and so, we can reduce the processor E-waste accumulation. The proposed Integrated Time and Task based Process Schedule (ITTPS) for cloud computing in Green IT is implemented.
using CloudSim software and various performance characteristics are simulated to estimate the performance of the proposed ITTPS in terms of Execution time, Memory consumption, and Performance.

References


Index Terms

Computer Science Architecture
Keywords
Cloud Computing  Green IT  E-waste  Low-range processor  Mid-range processor  High-end processor
ITTPS
Emulation