Abstract

Energy Consumption has become a critical issue for all kinds of computer systems, data centers and servers. Their demand for 24X7 connectivity and availability needs huge power in quantity of megawatts. The performance of microprocessors has been improving at an exponential rate and this trend is continuing from past two decades. However, increased performance does not come for free. One of the most important consequences of higher performance has been a dramatic increase in power consumption. For example, Intel 386 processor initially consumed about 2 Watts of energy; a Pentium 4 can use as much as 55 Watts. Various algorithms have been developed with respect to present needs and situations, but no one thinks of the future.

This paper discusses the novel approach to reduce the power consumption of the operating system and gives an entirely new dimension to look in. We have given the name “green” to that operating system, as its more energy efficient. Our paper will also explore the future power issues of the operating system and the holistic approach to tackle them, in the form of an entirely new operating system viz. Green OS.
[11] Low Power Operating System Project (Lesswatt.org by Intel)

Index Terms

Computer Science
Operating System

Key words

Low Power
Green OS
Localized Power Shutdown
Cloud Computing