Abstract

Nowadays, power consumption in computer system is an active and important subject of discussion in both research and political communities. Advances in Information and
Communication Technologies (ICT) over the past few years have shown an exponential growth during for few decades. There is a need of some strategies for solutions to optimize energy consumption in the ICT sector. Indeed, increasing the performance of such computer systems frequently requires increasing the number of resources, thus leading to higher power consumption and a negative impact on the environment. It not only ensures efficiency and reduced carbon emissions but also leads to potential cost/time savings in organizations. Intense computing actions that work on huge data, generally take hours to compute which could be reduced to few seconds using Grid Computing and Cloud Computing. The paper provides a basis for using Grid Computing and Cloud Computing for green ICT.

References

- HM Treasury, Stern Review: The Economics of Climate Change, 2006, pp. 2
- The ecological impact of an industry is expressed in terms of its 'Carbon Footprint' Starik and Rands, 1995.
- Vineetha Paruchuri "Greener ICT: Feasibility of Successful Technologies from Energy Sector ".
- Global e-Sustainability Initiative (GeSI) and Boston Consulting Group, SMART 2020: Enabling the Low Carbon Economy in the Information Age - United States Report Addendum, Copyright © Global e- Sustainability Initiative, 2008.

**Index Terms**

Computer Science  
Grid Computing

**Keywords**

Grid Computing  
Cloud Computing  
Energy Saving  
Green ICT  
HPC