Abstract

This research developed a modification to the Grid Accounting Scheme (GridBank) by formulating a model to enhance the scheme. The enhanced scheme was simulated and its performance was evaluated. This was done with a view to eliminating the manual mode of processing as well as speed up transactions and reduce time delay. The PayPal layer was added to the existing three layers which enhanced the scheme to allow for the automation of the GridBank administration module. The enhanced scheme was formulated using the web service approach that allowed cross platform interoperability. The results of the simulation showed that as the number of users increased, the processing time gradually reduced for the enhanced scheme which made its processing delay to be reduced. Also as the number of available resources increased the enhanced scheme scaled the load properly. These showed improvements over the existing scheme. It was concluded that the enhanced accounting scheme provided the required automation for efficient and secure grid accounting operations.
- Ford, M. 2006. NGS Resource Usage Service Manchester Computing. The University Manchester USA.

**Index Terms**

Computer Science
Distributed Computing
Keywords
Grid Accounting Scheme  Processing  Delay  Load  Scalability