Chapter 1

Introduction

1.1 Research Objective

The main objective of this research work is to suggest a model which is based on Grid Computing for E-Commerce Application.

During my research work I studied the grid computing and its model and suggested a model for E-Commerce Application.

It can been seen in the next chapter that, grid computing provides access to remote resources and that model require two type of components. First component is front end and the second is back end. Client interacts with the front end. The front end is a one machine. Client sends the request for any service, that request will be processed by any resources of grid. So any processing power will be done by any resources of grid. Same it will use other resources of grid.

The user, who is using our grid, fills that all the processing or storage is done in one machine (front end), but actually it will be done by resource of grid. Customer doesn’t know that how many resources of grid are used by them. Customer fills he/she is working on one machine (front end).
Back end is a collection of many computers, servers and data storage systems, which form the grid. Back end will perform all tasks like processing, storage and many more. Front end is connected with back end with internet.

The aim of this research work is to create model using grid computing for toll tax system.

1.2 Statement of the title

ANALYSIS & DESIGN OF A MODEL FOR E-COMMERCE APPLICATION USING GRID COMPUTING
1.3 The Research Area, Problem Domain and Literature Survey

Grid computing is the sharing of resources or CPU power. Some process requires more CPU power or more disk space but it is not possible in one machine, So We can develop a virtual organization that is the a GRID. This GRID is the collection of heterogeneous machines connected through network.

There are many E-Commerce Application available. E-Commerce application requires more power to compute the result. This can be achieved using GRID. In toll tax booth, number of vehicles passes in one day. For that we can use grid computing to make the manual process of collecting tax.

1.4 Relevance of research

I have study many e-commerce related model and design GRID Model that can be used for Toll Tax Booth. Chapter 6 contains the new GRID model for e-commerce applications.

1.5 Details of Remaining Chapters

Chapter 1 is ”Introduction”. This chapter contains introduction of Grid computing, research problem, objective, etc.

Chapter 2 is ”Grid Computing Basics” that contains the basic of Grid Computing. It contains definition of Grid Computing, its architecture and other basic detail.
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Chapter 3 is ”Grid Computing Vs Cloud Computing” that contains the similarities and difference between grid computing and cloud computing.

Chapter 4 is ”Grid Computing Application Development tools and technology” that contains the tools used to develop Grid Application and its middleware. This chapter describes the Globus Toolkit,gLite, UNICORE, GridSim and other tools.

Chapter 5 is ”Existing Grid Computing Applications/Projects with its Model” that contains the exiting model of Grid Computing.

Chapter 6 is ”Proposed Grid Computing model for E-Commerce Application” that contains the proposed Grid Computing model. This chapter contains the diagram and source code for proposed model.