A novel economic framework for cloud and grid computing

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ABSTRACT

Cloud computing refers computing over the Internet. Grid computing offers large computing and storage capacity. Here, a new real time economic system framework depend upon the cloud computing. It analysis macro-economic and predict about the financial markets. This system is designed to work with internal and web based application. And also it can be implemented on several web servers.

KEY WORDS: Framework, Markets.

1. INTRODUCTION

Cloud computing provides online business applications. Through web browser all applications are accessed. Servers contain both information and software. Grid computing is one form of distributed computing. It collects groups of networks, loosely coupled or distributed systems which is generally performs very large tasks. The computer systems capable of self- management are named autonomic computing. Most of cloud structures have not centralized or very small. In grid computing the task is shared between numbers of computers. The range of task may vary from small data storage to difficult calculations. It can be extend over the world. Some computers are joined to create virtual supercomputer. Grid Computing offers the essential architecture needed for sharing varied number of resources including storage, desktops, supercomputers, data, applications, sensors and online scientific instruments.

Problem description: There are number of drawbacks in existing system. In previous frameworks only grid computing is used. There is no software as a service. We can access only local information. In this new architecture both grid and cloud computing is used. It provides software as a service. The data can be access by all over the world

System architecture: Primary Server, Clients and The Financial Data Center .The Financial Data Center is basically a bulk database that stores all information. The Financial Primary Server is composed of The Autonomic Computing Element, Quotation Gateway Broker and The Account Manager. The Autonomic Computing Element has financial models that perform the various operations and analysis. Clients are the various systems in and around the cloud and their accounts are managed by the account manager. The Broker has the job of passing the requests from the client around to the workload management system.

The system architecture contains following,

a. Financial Primary Server
b. Financial Data Center
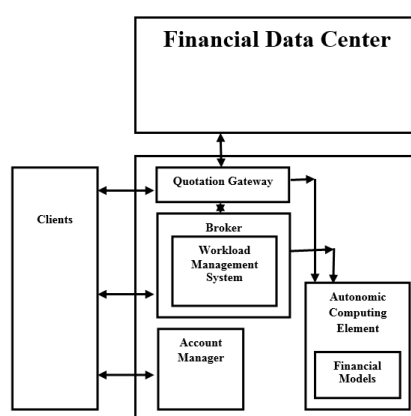c. Workload Management System
d. Clients

Figure.1. System architecture

System architecture which is shown in Figure.1. There are following parts of this architecture.

Financial primary server: FPS contains a sequence of interrelated systems. Their functionalities/modularity's are:

Real time Quotation Gateway: Financial data center Application program interface is used to communicate. This is used to request data and receive data. And also this is used to forward the information to corresponding users.

Analyses/Forecasts: These accept data from real time to market analysis. These programs are estimate the nature of client for a specific instrument.

Grid Instruction Set: This is used to submit result of analysis. And also returns request of forecast to grid.

Packages: These packages should be copied into grid. It contains financial models.

Computing component: If it system is in offline, perform local analysis and requested forecast operations.

Account Manager: Checks and maintains authentication of clients.

Financial data center: This is used to store all private and confidential information. Trusted servers only contact and process the data.

Workload management system: It support interoperability between other grid systems.

Clients: The software is web based. And it is arranged in various tabs. The tabs contains the following,

Quotes: it acts like a spreadsheet. Each and every row can get input and process it.

Graphs: Uses to show the graphs. It can modify a specific graph.

News: the updated news displays in regular periodic time.

Analysis/Forecasts: it will be possible to make a request and to display the result of a selected financial instrument analysis/forecast request. And view standard forecasts for the reference markets.

Implementation: This system is implemented by using java language with netbeans environment. Database as mysql and frontend as PHP with Pentium IV processor.

2. CONCLUSION

Thus this system is designed by using the specified methods and techniques. Further, application was tested and was found to be running properly. Now the study is completed for high level design (largely described herein). In future, may be involved in different number of stages.

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