ITC¹² The 2nd Information Technology Colloquium 2012



Irbid National University Information Technology Department

Grid computing systems

Load balancing algorithms, Study and comparisons

BY Project Team :

Omar Al-Ayyoub

Supervision:

Dr. Safwan al Salaimeh

ITCP The 2nd Information Technology Colloquium 2012 **ABESTRACT**

Through the evolution of all sciences fields, researching areas, and series of projects which requires a massive amount of computational power, makes the extension of using more powerful resources to handle this evolution, is extremely mandatory.

Grid computing It's an involving network application that can be expected to become an essentially and necessary component of the new global knowledge economy of the 21's century.

A type of parallel and distributed system that enables the sharing, selection, and aggregation of geographically distributed resources dynamically at runtime depending on their availability, capability, performance, cost, and users' quality-of-service requirements.

A load balancing; an important related concept to grid computing, will be our focus and will be the scope of the research project.

Load balancing will help make a network more efficient, it distributes the processing traffic evenly across a network making sure no single device is overwhelmed or the others are idle.

For more understanding of the load balancing process, we will talk about two of the most popular methods or algorithms used in load balancing ,(Round Robin Algorithm, Ant Colony Algorithm), discus them, make comparisons between them depending on the experimental results of a simulation.

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Introduction...

Grid computing Is an involving network application that can be expected to become an essentially and necessary component of the new global knowledge economy of the 21's century.

Grid computing can mean different things to different individuals,

The grand vision is often presented as an analogy to power grids where users (or electrical appliances) get access to electricity through wall sockets with no care or consideration, for where or how the electricity is Actually generated.

In this view of grid computing , computing becomes pervasive and individual users or client applications can gain access to computing resources (processors, storage, data, applications,.. and so on) as needed with little or no knowledge of where those resources are located or what the underlying technologies, hardware, operating system the other clients Are uses.