

DEPARTMENT OF COMPUTER SCIENCE AND SYSTEMS ENGINEERING

An Guest Lecture

on

GRID COMPUTING

The Department of Computer Science and Systems Engineering organized a guest lecture on **"GRID COMPUTING"** on 24th January, 2013 for IV CSSE,CSE,IT and MCA students.

Dr. P Venkata Krishna, Professor, School of Computer Science, VIT University, Vellore enriched the students on principles of grid computing and grid to cloud transition.

Grid computing is a distributed architecture of large numbers of computers connected to solve a complex problem. In the grid computing model, servers or personal computers run independent tasks and are loosely linked by the Internet or low-speed networks. Computers may connect directly or via scheduling systems.



Professor Krishna garu delivering a talk on grid computing

The fields of Grid, Utility and Cloud Computing have a set of common objectives in harnessing shared resources to optimally meet a great variety of demands cost-effectively and in a timely manner. Since Grid Computing started its technological journey about a decade earlier than Cloud Computing, the Cloud can benefit from the technologies and experience of the Grid in building an infrastructure for distributed computing.

Grid computing enables the creation of a single IT infrastructure that can be shared by multiple business processes. In general, a distributed computing program is divided into many parts to run on multiple servers connected via a network. Grid computing coordinates the sharing of CPU, application, data, storage and network resources. Grid computing is the pool of computers actively glued into a virtual computing architecture by the other related components such as middleware software, interconnects, networking devices, and storage units.

In many ways, grid computing is a solution without any problems to solve. The pioneers of grid computing are ready to solve the hardest problems that any industry is willing to throw at them. The task at hand is to find more problems that need to be solved.

Main industries embracing grid computing:

- aerospace
- automotive
- insurance
- investment banking
- finance
- gaming
- government
- media

The four vital issues which must be resolved in a distributed computing system before it can be called a Grid. These are Authentication, Authorisation, Resource Access and Resource Discovery. They lead to the idea of Virtual Organisations of collaborators who share resources over a Grid.



Faculty and student participants for lecture