Abstract

The computational grid solve most of the problems that arise in many scientific application with the help of the heterogeneous resources which is spread across the
distributed environment. The challenges that arise in such case of utilization of the resources and scheduling of jobs can be overcome by the techniques of error detection mechanisms. The early error detection mechanism collects the entire information about the resources which are available in the heterogeneous distributed environment. The resource information can be used during the allocation of jobs to that resources so that the job gets executed successfully without any failure in the resource. But the error detection mechanism also has its own drawbacks like the remote host server may be down, file transfer services may not supported by the host, there may be any malfunctionality in the service protocols and the hardware failure which occurs during data transfer also cannot be tackled in error rectification. To avoid this we introduce fault tolerance mechanism to overcome the difficulty.

**Reference**

- Radha.B and Sumathy.V Comparison of ACO and PSO in Grid Job Scheduling. CIT International journal of networking and communication Engineering print: ISSN 0974 – 9713 & Online: ISSN 0974 – 9616 DOI: NCE102009003
- Paul Townend, Jie Xu, Fault tolerance within a grid environment, As part of the e-Demand project at the University of Durham, DH1 3LE, United Kingdom, 2003.
- Greg Bronvestsky, Rohit Fernandes, Daniel Marques, Keshav Pingali, Paul Stodghill, Recent advances in checkpoint/recovery systems, in: Workshop on NSF Next Generation Software held in conjunction with the 2006 IEEE International Parallel & Distributed Processing Symposium, April, 2006.

**Index Terms**

Computer Science
Distributed Systems
Enhancement of Grid Scheduling using Dynamic Error Detection and Fault Tolerance

Key words

- Distributed systems
- data aware scheduling
- Error Detection
- Fault tolerance
- Grid computing
- performance of systems
- Scheduling