

## **Neighbour replication on grid deadlock detection framework**

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### **ABSTRACT**

Data grid is a distributed computing architecture that integrates a large number of data and computing resources into a single virtual data management system. It coordinated the data from several of resources and enables the sharing of the data. In handling and managing data grid some of problems must be considered such as reliability and availability of the data to the user access, network latency, failures or malicious attacks during execution and etc. These problems can overcome by using replication technique. The data will replicate into several sites. If one of the sites has fail, it will fail independently and not affect to others node. The deadlock is the most important problem that must be manages when sharing any data in data grids. Furthermore, it can reduce the throughput by minimizing the available resources, so it becomes an important resource management problem in distributed systems. In this paper, we propose Neighbour Replication Grid Deadlock Detection (NRGDD) framework to detect the deadlock during transaction occur in Neighbour Replication on Grid replication model. Based on this framework it shows how the deadlock can be detected.

### **KEYWORDS:**

NRGDD framework; replication; deadlock detection; probe message

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