In general, it is assumed that a parallel program will execute on reliable hardware. A fault tolerant program and underlying infrastructure should be capable of surviving failures such as system crashes and network failures. At the highest level the application should be capable of automatically recovering from a set of faults without any change to the apparent behavior of the program. The process of check pointing may be used to allow a program to save its state to persistent storage. One should always anticipate that errors in communications will occur.

Routing in mobile networks generally involves multiple hops, whereas in distributed networks, it's a challenging task [1]. Distributed computing systems can provide several advantages, such as scalability, fault tolerance, and load balancing. Dealing with distributed systems and data storage together, introduces several challenges and difficulties [2], such as dynamic load balancing, unstable connections, communication failures, lack of flexibility in storing data, lack of auto-reconfigurations, limited radio range. A network's reliability has always been a major concern. Among different other factors such as software extensibility, maintainability, and usability, etc., Reliability have greater impact on software's life, because it can make the running application out of order [1, 2]. Reliability is a very broad term and any software application running in distributed environment can have various definitions. Reliability is associated with unexpected failures of products or services and understanding why these failures occur is key to improving reliability. A principle requirement for the creation of a fault-tolerant system is the ability to detect errors. Fault tolerance in relation to adhoc wirelessly interconnected mobile devices is a far more complex task than fault tolerance for high end clusters and parallel machines with fixed cabled infrastructure.

Literature

1. Bhuvana Suganthi D., Manjunath R., Anuradha V Rao. High Performance Mobile Computing Nodes in Distributed Networks // International Journal of Engineering Trends and Technology. 2014. Vol. 4, iss. 3.

2. Bobed C., Ilarri S., Mena E. Distributed Mobile Computing Development of Distributed Applications Using Mobile Agents. PDPTA. 2010.