Advanced Failover and Failback Management in Server Systems

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Failover is the capability to automatically switch over to an extra application server which is in standby mode, upon the failure or abnormal termination of the original ipplication server. This happens without human interference and generally without giving the warning. Failback involves the process of restoring a system in a state of failover back to its original state. When a failure occurred in local server, it will be put in suspended state by making its fence lower. At the same time, the recovery member's state will be active to receive connections by making its fence up. It will activate the recovery server. Though there are many failover failback systems, it is very essential to enhance the features of the present system. The proposed system will provide enhanced performance, efficient resource utilization, advanced communication between agents, higher availability and reliability.

Shoal-C++, the proposed cluster management framework, provides the foundation for network configuration, and dynamic and autonomous cluster formation. The ultimate goals of the system is to build a library, which consist of GMS client API and GMS SPI. Each machine in the group/network has implemented the signals Join, Joined and ready, Failure suspected, Failure notify, Failure recovery and Planned shutdown in their application to successful identify the nodes and get work done.

Grouping of servers (Clustering) gives solution to solve two significant problems: fault tolerance and load balancing. The existing Shoal-C++ is concentrated on the component fail over, but the mirrored component is started from its beginning at failover and fallback implementation.

Key words: Failback, Failover, Shoal-C++