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A Project Report On

**“AUTOMATIC RECONFIGURATION FOR LARGE-SCALE
RELIABLE STORAGE SYSTEMS”**

(Sponsored by KSCST, IISC, Bangalore)

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ABSTRACT

We live in a world of Internet services such as email, social networks, web searching, and more which must store increasingly larger volumes of data. These services must run on cheap infrastructure, hence they must use distributed storage systems, and they have to provide reliability of data for long periods as well as availability. Byzantine-fault-tolerant replication mainly used in Internet services that store critical state and preserves it despite attacks or software errors, which enhance the availability and reliability of the services. In existing system we assume a static set of replicas, or have limitations in how they handle reconfigurations. This can be problematic in long-lived, large-scale systems where system membership is likely to change during the system lifetime and also we present a complete solution for dynamically changing system membership in a large-scale Byzantine-fault-tolerant system. The membership service runs mostly automatically, to avoid human configuration errors; is itself Byzantine fault-tolerant and reconfigurable; and provides applications with a sequence of consistent views of the system membership.

Reconfiguration handling is one of the limitations; there is a huge problem in long-lived large scale systems, whenever there is a variation in the membership in the entire lifetime of the system. In proposed system, we present a solution for dynamically change in membership for a large-scale Byzantine-fault-tolerant system. A service tracks membership and notifies other system nodes periodically, which runs mostly automatically to avoid human configurations errors. The membership service using distributed hash table called dBQS that provide semantics even changes in replica sets.