**ABSTRACT**

Cloud storage has become a lovely answer to change the storage management for each enterprise and individual users. However, ancient file systems with intensive optimizations for native disk-Based storage backend can't absolutely exploit the inherent options of the cloud to get fascinating performance. During this project, we present the look, implementation, and analysis of Cloud, a cloud based mostly filing system that strikes a balance between performance and financial value. In contrast to previous studies that treat cloud storage as simply a traditional backend of existing networked file systems, corpus is designed to handle many key problems in optimizing cloud-based file systems like the info layout, block management, and billing model. With fastidiously designed information structures and algorithms, like distinctive semantically correlative information blocks, kd-tree based caching policy with self-adaptive thrashing interference, effective information layout, and optimum garbage pickup, cloud achieves smart performance and value savings underneath varied workloads as incontestable by intensive evaluations.