

NLSS: A Near-Line Storage System Design Based on the Combination of HDFS and ZFS

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Abstract—Through analyzing the storage system requirements of supercomputer this paper designs a near-line storage system called NLSS based on the combination of HDFS (Hadoop distributed file system) and ZFS (Zettabyte file system). NLSS uses fat storage nodes (large storage servers) to build near-line storage clusters based on HDFS, and uses the ZFS file system to further enhance HDFS. NLSS effectively reduces the burden of supercomputer online storage system. Experiment results show that NLSS can acquire better storage utilization, reliability and scalability while ensuring appropriate performance.

Keyword—dynamic management, HDFS, near-line storage, reliability, ZFS



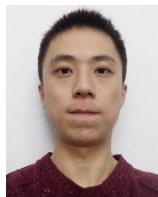
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