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Abstract
There are numbers of inconvenient disadvantages when using traditional file systems. The promotion of network speed and the digitizing of data bring the new era of information technology. Any person can access data with variety and diversity from internet. The trend of large amount of data such as multimedia files is sooner or later eating up the storages, and the management of storages is still a main problem. Therefore, the new technique of object storage is proposed, that overcomes disadvantages of traditional file systems and eases management problems to a profusion of data.
For the need of data management, the storages are no longer to be a single purpose for data read/write. An object storage system shifts jobs of file management from the file system to the storage device. The storage device itself maintains the data and therefore relieves burdens of file system. Metadata and data of a file are managed separately by MDS (metadata server) and OSD (object storage device) respectively to increase the IO efficiency.
This thesis discusses development status of current object storage systems, and also introduces T10 as well. We analyze an object storage system which is open source and originally developed by Intel. We propose a mechanism of pre-processor and post-processor for file storage according the file attribute. By the mechanism, we implement a smart function to compress text files whenever saving data. The mechanism benefits the object storage system by increasing more usable storage space.
Advisory Committee Lain Jou,Tsai - advisor

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