Baidu Improves Tape-Backup Speeds by Caching with Intel® Optane™ SSDs

3X more
data backup with high endurance[1]

67% reduction
in time backing up the same amount of data[2]

Baidu backs up huge amounts of cold data on magnetic tape libraries. Tape can write data fast, but the data first needs to be sequentialized on a cache disk. Baidu was using hard disk drives (HDDs) to cache the data, but the HDDs could not feed data as fast as the tape could write it. Baidu evaluated three options for replacing its HDD cache disks with faster technology—two based on NAND flash solid state drives (SSDs) and one using Intel® Optane™ SSDs. Baidu found that using Intel Optane SSDs met the speed requirement using fewer SSDs than the NAND solutions. By using Intel Optane SSDs as caching disks on these data nodes, Baidu was able to meet a heavy read/write mixed-workload bandwidth requirement with excellent endurance.

Products and Solutions
Intel® Optane™ SSDs

Industry
Internet Software, IT Services

Organization Size
10,001+

Country
China

Learn more
Case Study

"Baidu has encountered bandwidth and write endurance challenges in processing new client data and in duplicating tape library backup data in parallel. Intel® Optane™ SSDs bring great value with high bandwidth, high endurance, low latency, and easy maintenance, which helps Baidu accelerate our tape-library solution innovations while reducing cost and improving efficiency."

Baidu Binghe Tape Library Archive Storage Group

1, 2 For more complete information about performance and benchmark results, visit https://www.intel.com/content/www/us/en/customer-spotlight/stories/baidu-tape-customer-story.html