

Suning Commerce Group

Driving 25x Faster Backup at China's Largest Retailer with Veritas™ Solutions

Fast-growing Suning Commerce Group needed to streamline a backup process that involved manually transporting 600 to 800 active tapes between facilities, and the total number of active tapes was increasing year by year. Suning engaged Veritas Consulting Services to design and implement a new strategy using Veritas data protection software and appliances. Results include up to 25x faster backups, automated replication between data centers, and 50 percent reduction in backup administration. The company expects to achieve payback within the first year.



SUNING 苏宁 / 中国商业的领先者

Organization profile

Website: www.suning.cn

Industry: Retail

Headquarters: Nanjing, Jiangsu, China

Employees: 180,000

Key challenges

To support rapid growth and higher service SLAs, Suning Commerce Group needed to improve backup efficiency, reduce the risk of data loss, and reduce staff time spent managing tapes.

Solution

The company engaged Veritas Consulting Services to deploy Veritas NetBackup™ software and appliances in two data centers.

Benefits

Improved data protection

- Up to 99.5% lower data loss (0.1% vs. 1%-2% previously)
- Complete backup of several million small files that were impractical to protect before
- 2-3 hours less time needed for data recovery

Reduced staff time and costs

- Automated replication eliminates physical transport of 600-800 tapes
- 50% less time spent on backup administration
- Projected payback within one year
- 60% lower data protection costs (CN¥2 million vs. CN¥5 million previously)
- 50% less storage required due to deduplication

Reduced network resources

- Up to 25x faster file server backups
- Up to 96 percent lower server resource utilization during backups
- 88% lower backup data volume via deduplication
- 40% less backup load on corporate network

China as the world's marketplace

To describe growth at Suning Commerce Group as astronomical is understating the facts. The company opened its doors in 1990 as an air conditioner specialty store taking up 200 square meters in a Nanjing, Jiangsu, China storefront. In the 24 years since, Suning has grown into the world's 28th-largest retailer.

Today its revenues total CN¥230 billion (US\$37 billion). Its 180,000 employees operate 1,700 stores in more than 600 cities across mainland China, Hong Kong, and Japan. E-commerce platform Suning.com is China's largest retailer and ranks among the top three business-to-consumer (B2C) enterprises in that country.

The growth is unlikely to slow soon. "China is on pace to become the largest consumer market in the world," says Zhang Jindong, chairman of Suning Commerce Group. "Not only will Suning's sustained, long-term investment in innovation and new retail technologies drive aggressive business growth, it will help transform China from the world's factory into the world's marketplace."¹

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Su Zhiyong

Deputy Director, Operation and Maintenance Center,
IT Division, Suning Commerce Group

Tape backups create risks

Until recently, Suning used Veritas NetBackup™ 6.5 software to protect its 300 terabytes of data. Critical databases used a disk-to-disk-to-tape backup process, while applications backed up directly to tape. Moving data to the company’s disaster recovery site involved physically carrying tapes between locations.

“A process that involves transport of tapes creates risks,” says Su Zhiyong, deputy director of operation and maintenance center, IT division for Suning Commerce Group. “We would sometimes experience damage to the tapes, and the data would be lost; we could not recover the backups. Moving tapes took a lot of staff time as well.”

After evaluating solutions from EMC and Veritas™, Suning decided to upgrade to Veritas NetBackup software and install a 40-terabyte Veritas NetBackup 5230 Appliance in each of its two data centers. “We selected the Veritas solution largely because it simplifies remote disaster recovery,” says Mr. Su. “Because our volume of data is increasing rapidly, the deduplication functionality was also very attractive.”

Suning engaged Veritas Consulting Services to design and deploy the solution. “The team from Veritas Consulting Services was highly professional,” says Mr. Su. “They know the technology well, and they gave us great advice with the implementation.”

Backing up as much as 25x faster

Today data backs up to the NetBackup appliance in the primary data center, then NetBackup Auto Image Replication (AIR) automatically replicates it to the disaster recovery facility 30 kilometers away. NetBackup deduplicates backup data both at the source and in the appliances themselves. NetBackup Accelerator ensures that only changed data is transmitted to the appliance.

On an important application server, backups now complete four times faster. “We improved a 40 megabyte-per-second backup speed to 155 megabytes per second, for a 75 percent reduction in backup time,” says Mr. Su.

The improvement is even greater for file server backups. “Before, data on one particular file server transferred at a speed of about 2.5 megabytes of backup data per second,” says Mr. Su. “With NetBackup Accelerator, this server’s backup speed is now about 60 megabytes per second, or 25 times faster, and its utilization of server resources during backups is down about 96 percent.”

The solution has accelerated data recovery as well. “For core applications, we have a recovery time objective of two hours,” says Mr. Su. “When we recovered data in our legacy environment, we spent two to three hours just driving the tapes around. NetBackup AIR eliminates the time on the road and enables us to recover data much more quickly.”

More data protected in 50 percent less time

Because the solution is so efficient, Suning can back up many files that previously were unprotected. “We have several million small files that we couldn’t back up before,” says Mr. Su. “We would have had to copy the files manually and then manage the tapes, and we didn’t have the staff to do that. Now with the automation in NetBackup and NetBackup AIR, we can run backups on these small files as well.”

Technology environment

- **Server platform:** IBM AIX, Red Hat Enterprise Linux, and Windows Server 2003 and 2008, plus Linux KVM to virtualize some non-core applications
- **Applications:** SAP ERP
- **Database:** IBM DB2, MySQL, Sybase, Mongo, and Hadoop
- **Storage:** IBM DS8000, Huawei, and EMC storage arrays

Solutions

- Veritas NetBackup™
 - Deduplication
 - OpsCenter Analytics
 - NetBackup Accelerator
- Veritas NetBackup Appliance 5200 Series

Services

- Veritas Consulting Services
- Veritas Essential Support Services



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Although the company protects more files than ever before, Mr. Su says backups take “much, much less time” than managing and moving 600 to 800 LTO5 tapes. “The appliance is straightforward to manage; it has cut backup administration in half,” he says. “Previously, backups took two staff members about four hours each day. Now they spend two hours, at most, on management of the appliances.” Saving two hours a day for two IT staff reclaims CN¥146,000 (US\$23,000) in productivity for Suning.²

Mr. Su estimates that the NetBackup appliances will reduce the company’s rate of data loss from 1 to 2 percent to 0.1 percent, a reduction of 99.5 percent, by moving backed up data from tape to disk. The NetBackup OpsCenter Analytics option keeps staff apprised of whether any backups failed to complete. “The reports from NetBackup OpsCenter Analytics are very useful,” says Mr. Su. “They tell us about the status of backups on the client end. They also provide an analysis of

backup risks, letting us know which nodes are at risk because of issues with backups.”

In case of issues, Veritas Essential Support Services provides 24x7 support. Mr. Su has not required much support, he says, but “when we call to get help, we do get help, and the problem is quickly solved.”

One year to payback

The solution’s deduplication features have reduced the size of the backup image by as much as 88 percent, trimming 62.5 terabytes of raw backup data to 7.5 terabytes. As a result, there are 55 fewer terabytes of backup data to store, saving CN¥ 82,500 (US\$13,200) in tape costs. Also, smaller backups place about 40 percent less load on the corporate network. “We have about 50 percent lower storage requirements overall,” says Mr. Su.

In fact, he estimates that compared with the legacy environment, Suning is avoiding spending about CN¥500,000 on tapes, CN¥2 million on a tape library, and CN¥500,000 on backup software. “The total cost of our tape operations was CN¥5 million (US\$805,000),” he says. “We are saving CN¥3 million (US\$483,000) with our new Veritas solution. We expect to achieve payback on the Veritas NetBackup appliances in less than a year.”

With data deduplicated and the backup process streamlined, China’s largest retailer has the data protection support it needs to keep on growing.

For more information:

Contact your local Veritas Sales Representative or Business Partner, or please visit: www.veritas.com

北京 Beijing

北京市东城区东长安街1号东方广场

东方经贸城东三办公楼11层1-4单元

邮政编码: 100738

电话号码: +86 10 8518 3338

传真: +86 10 8518 6928

1. “Suning, China’s Largest Retailer, Opens First Silicon Valley R&D Center,” prnewswire.com. Nov. 19, 2013. Accessed Mar. 28, 2014 2 2 IT staff x saving

2. hours per day x 365 days per year = 1,460 hours x (CN¥ 200,000 per year/2000 working hours per year = CN¥100 per hour cost of IT staff) = CN¥146,000 savings. Assumes CN¥ 200,000 per year for a storage engineer in China, as reported by Hays salary survey, page 57.