



Korean Broadcasting System

Raising Availability, Lowering TCO, and Achieving Fast Payback with Solutions from Symantec and MAJORTECH

The Korean Broadcasting System faces an increasing demand on its applications from a growing number of viewers and staff. The company turned to Symantec solutions to boost availability, enhance storage management, and strengthen data protection. The solutions have improved availability by two percentage points and reduced recovery times 50-fold. They have lowered storage administration costs by one third and backup staff time by 50 percent. The result is 100 percent payback in 6 months to a year.

Company Profile

The Korean Broadcasting System, (KBS), <http://english.kbs.co.kr/>, is the public service broadcaster of Korea. Formed in 1947, KBS has been the country's leader in program production and audience size, spearheading developments in television, radio, and broadcast technology.

Industry

Media

Solution

Storage Management
Data Protection

Growing in popularity

The Korean Broadcasting System (KBS) is a public service broadcaster and the leading broadcaster in that country. According to a poll conducted of the Korean public in 2002, it's also the country's most trusted media organization.

Because of KBS's reputation and rising popularity, it has grown extensively, and now includes terrestrial TV channels, one satellite TV channel, seven radio channels, and more than 25 local TV stations. The company is also exporting \$26 million worth of original programming each year, becoming a new force in global broadcasting.

Striving to communicate—and be available

“We are a public broadcasting system, serving people in Korea and beyond, and our mission is to touch our audience's hearts,” says Mr. Hong-Seo Park, IT infrastructure manager at KBS.

The KBS audience—and its staff—are both growing. For the IT team which Park leads, the result was a need to upgrade the network infrastructure. This challenge became acute in 2002 when KBS data stood at 80 terabytes, increasing at 25 percent yearly. Much of the data is video footage, which is in frequent demand by the staff. The result was pressure on storage capacity and cost containment.

KBS has a multiplatform environment that includes hardware from Sun, HP and IBM. That increased the challenges of storage management and data backup. Also, key applications such as the network's Web server had 97.5 percent availability in 2001. Downtime was proving disruptive, because viewers and employees were increasingly dependent on KBS' Web-based tools such as interactive program schedules and online program archives.

“With Veritas Storage Foundation for Databases, we're able to accommodate a 25 percent annual growth in storage while reducing administration time by one-third. That enabled us to achieve 100% payback on Storage Foundation in approximately one year.”

Hong-Seo Park

IT Infrastructure Manager
KBS

Symantec solutions have raised availability by two percentage points while lowering storage and backup staff costs by up to 50%.

Choosing Symantec

Park's team set out to evaluate solutions that could help KBS achieve higher availability, more efficient storage administration, and better data protection. "We evaluated Sun and Symantec solutions for storage management and clustering, and preferred Symantec," Park says.

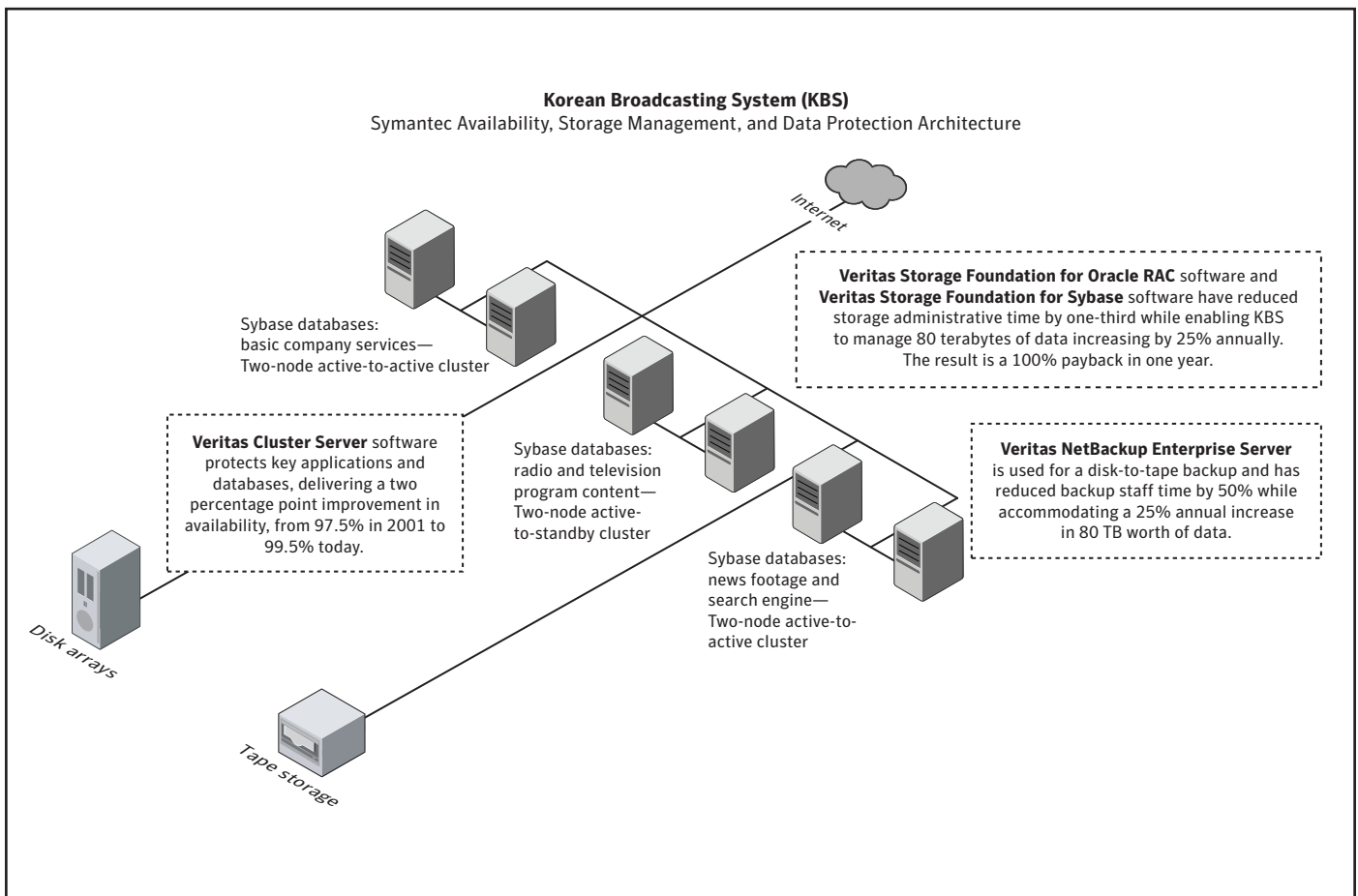
The KBS IT team started using Veritas Storage Foundation software from Symantec in 2002, and Veritas Cluster Server software and Veritas NetBackup Enterprise Server in 2003.

Gaining control of storage

"Veritas Storage Foundation allowed us to rapidly improve our storage utilization," Park says. "From one management console, our administrators can quickly see which of our storage resources are under- and over-allocated, and change allocations if necessary in minutes rather than hours, without going around to each device.

"If storage data needs to be migrated, our staff can perform that task from the same console, without interrupting the availability of our applications. And we can manage storage on each of our platforms from Storage Foundation's single graphical interface. This reduces training and administration hours."

The KBS team uses Veritas Storage Foundation for Oracle RAC because it provides a complete clustering solution that has been certified by Oracle to work with Oracle RAC (9i and 10g). As a result, an administrator can manage the storage resources more efficiently using a cluster file system rather than the more complex raw devices. It lets administrators set policy-based controls for the database, as well as automate various tasks and create alarms for monitoring critical parameters in the cluster.



Similarly, Storage Foundation for Sybase provides KBS administrators with a unique accelerator for Sybase, Veritas Quick I/O, which delivers raw device performance or better, with the manageability benefits of a file system.

“With Veritas Storage Foundation for Databases, our overall result is that we’re able to accommodate a 25 percent annual growth in storage while reducing administration time by one-third,” Park says. “That enabled us to achieve 100 percent payback on Storage Foundation in approximately one year.”

Boosting availability

Because of its positive experience with Veritas Storage Foundation, KBS chose Veritas Cluster Server software in 2003 and worked with Seoul-based Symantec Business Partner MAJORTECH to design and implement a clustering solution.

Veritas Cluster Server is used with three two-node local clusters to enhance availability. One cluster uses active-to-active servers, and contains basic company data from Sybase databases. Another cluster uses active-to-standby nodes, and makes radio and television program footage available that are contained in Sybase databases. A third cluster uses active-to-active nodes to ensure that TV news footage is searchable and available.

“We value the clustering flexibility of Veritas Cluster Server software,” Park says. “It offers us options that let us maximize resources, gaining the protection of clustering without mandatory use of expensive and underutilized passive servers.”

SOLUTION AT A GLANCE

Business Drivers

- Improve service to viewers/employees by enhancing application availability
- Reduce IT overhead by increasing control of growing storage needs
- Ensure continuity of operations by increasing data protection

Technology Challenges

- Implement clustering/failover to improve availability of key business applications
- Simplify and streamline storage management in a complex multiplatform environment
- Decrease backup window while managing 25% annual data growth

Solution

- Symantec centralized administration streamlines and simplifies multiplatform technology challenges

Symantec Products

- Veritas Storage Foundation for Oracle RAC
- Veritas Storage Foundation for Sybase
- Veritas Cluster Server
 - Cluster Server Agents: Sun ONE, Informix, Oracle, Sybase
- Veritas NetBackup™ Enterprise Server
 - NetBackup agents: NetBackup for Oracle, NetBackup for Sybase

Technology Environment

- Applications: ERP, CRM
- Databases: Sybase, IBM Informix, Oracle, dBase
- Server platform servers running Apache : 2 nodes IBM p670, 2 nodes HP rx7620
- Storage: Sun StorageTek, IBM Shark, HP XP 12000

Symantec Services

- Symantec Technical Support

Symantec Partners

- MAJORTECH (www.majortech.co.kr/english/company)

Cluster Server’s out-of-box support

KBS also likes the fact that Veritas Cluster Server has out-of-the-box support for Informix 12.5, Oracle 9i, and Sybase 12.5. KBS’s version of Veritas Cluster Server has agents that monitor these applications, and if one of them goes down, Cluster Server automatically either restarts it on the same node or moves it to another node of the cluster and restarts it there.

Users are being well served. “With our Symantec solution, we increased availability of our key applications by 2 percentage points, from 97.5 percent in 2001 to 99.5 percent today,” Park says.

“With our Symantec solution, we increased availability of our key applications by 2 percentage points, from 97.5 percent in 2001 to 99.5 percent today.”

Hong-Seo Park

IT Infrastructure Manager
KBS

BUSINESS VALUE AND TECHNICAL BENEFITS

Enhanced Availability

- 2 percentage point improvement in availability, from 97.5% to 99.5%
- 50-fold improvement in recovery point objective (RPO) and recovery time objective (RTO)

Lower TCO

- One-third reduction in administrative time while managing 80 terabytes of data and 25% annual data growth
- 50% reduction in staff time for backup due to NetBackup efficiencies

Payback

- 100% payback on Storage Foundation in approximately one year
- 100% payback on VCS on approximately 6 month

“In the past five years, we are managing 10 times the data and hardware with only 2 times more IT staff. Symantec solutions are a big reason why.”

Hong-Seo Park

IT Infrastructure Manager

KBS

In addition, Veritas Cluster Server has improved KBS's recovery point objective (RPO) and recovery-time-objective (RTO) 50-fold.

The overall result is that “we achieved 100 percent payback on Veritas Cluster Server in six months,” Park says.

Ensuring data protection

Besides making sure that the data is available, KBS wanted to strengthen protection against data loss. In 2002, the company evaluated Veritas NetBackup™ Enterprise Server software in a side-by-side test with EMC NetWorker, and chose NetBackup for performance and ease of use.

KBS uses NetBackup in a disk-to-tape process, and sends all tapes for safe-keeping to its disaster recovery center in Taejon, about 100 miles from the main data center in Seoul.

Optimizing backup results

To allow for “hot backup” of its Oracle database, without taking the application offline, KBS purchased the NetBackup for Oracle agent. KBS also purchased the NetBackup for Sybase agent to support the parallel backup and restore capabilities of the Sybase ASE. These capabilities permit KBS to

run more than one tape device at a time for a single Sybase ASE backup or restore, helping reduce the time necessary to complete the operation.

The overall result is that data protection at KBS is optimized. “Although our data is growing at 25 percent a year, Veritas NetBackup has reduced our backup administration time Park says. “This allows the duties once handled by a full-time administrator to be handled part-time by a manager.”

Proving resilient

Support for these solutions comes from Seoul-based Symantec partner MAJORTECH, and MAJORTECH has demonstrated its value to the broadcasting network. “They made a particularly important difference three years ago, when a RAID disk crashed and caused one terabyte of data to be lost,” says Park. “MAJORTECH stepped in and showed us how to use NetBackup to achieve a faster-than-expected recovery.”

“What overall value are we getting from Symantec solutions?” Park reflects. “In the past five years, we are managing 10 times the data and hardware with only two times more IT staff. Symantec solutions are a big reason why.”