



# CASE STUDY

## Solution at-a-glance

### Company name

GAVS Information Services Private Limited

### Industry

Information technology

### Environment size

Enterprise

### Employees

220

### Customer application

Protecting data

### StorageTek® solutions

- L40 tape library
- D173 disk subsystem
- MirrorStore™ replication appliance

### Other vendor solutions

- BakBone NetVault software
- Linux operating system (server)
- Windows operating system (clients)

### Business results

- Faster retrieval of data and increased productivity
- Seamless recovery of data and restoration of configurations
- Centralized storage with dramatically decreased downtime
- Considerable savings in storage cost

## GAVS Information Services Private Limited

### StorageTek® enables GAVS to build a secured data recovery site and enhance productivity.

Being a leader in the highly competitive software industry and having a wide range of business interests in IT services — from software consultancy to outsourcing to running offshore product development centres for leading manufacturing and service players — GAVS Information Services Private Limited in Chennai, India, places a top priority on secured data storage.

GAVS continuously upgrades its systems and technologies to assure its clients that their data is safe. The company recently has developed a disaster recovery site at Pondicherry, near its Chennai headquarters. Since its inception, GAVS has been keen on building an organization that stands for high levels of dependability and customer satisfaction. The company has been successfully assessed at the following quality/information security standards: ISO 9001-2000, CMMi Level 5, CMM Level 4 and BS7799. It is now in the process of obtaining BS15000 standard certification.

The company's U.S. and North American operations are headquartered in Denver, Colo., with support offices in Reston, Va., and Boston, Mass. Its European operations are carried out from London.

### Business issues

GAVS was started in 1988, primarily as a product and customized solutions company for the treasury markets. It soon expanded its services to encompass several domains, including consultancy, outsourced product development and IT infrastructure management.

As the business volumes kept increasing, the company's elementary storage system, comprising stand-alone digital audio tapes

(DATs), became insufficient. It no longer could handle the increasing demand for storage capability and, most importantly, could not provide a comprehensive backup solution. Having set up a high-speed data and communication link for global connectivity, infrastructure and basic facilities designed to support a 24 x 7 work mode, GAVS wanted to set up a disaster recovery and backup facility to maximize business continuity.

"We wanted to go in for a reliable, scalable and more sophisticated storage solution, primarily as a proactive quality initiative. Hence, we decided to create a world-class, disaster-resilient infrastructure in preparation for the future needs of the business," says Mr. Ananthanarayanan, Network Manager.

Having a reliable storage environment also became mandatory for GAVS to comply with certain legislation and to carry out quality programmes. "We had to store all our development data in an environment that would have built-in redundancy and fault tolerance," says Mr. Ananthanarayanan.

### The solution

When the company decided to develop a solution based on a centralized storage area network (SAN), StorageTek® became a natural choice, as the company already had strong relationships with StorageTek at its onsite support centre. "We chose StorageTek also because it is a global company with a strong support team, and its solutions are interoperable and compatible with associated storage area components, supporting tools, and so on," says Mr. Ananthanarayanan.

In the first quarter of 2003, GAVS signed up with StorageTek to buy a full-blown solution for data protection. StorageTek provided a LAN-free backup solution, comprising the L40 tape library with Linear Tape Open (LTO) drives, and installed MirrorStore™ replication appliance — an open systems data replication and storage appliance — and BakBone's NetVault — a backbone and restore solution. The servers run on the Linux operating system and the clients on Windows. At present, GAVS has 20 servers, of which 10 are high-end with more than one gigabyte of RAM and dual CPUs. It took more than two weeks to install the whole system.

### Business benefits

The storage solution enables GAVS to scale up the number of computers and projects effectively. It also helps GAVS to increase the productivity of its IT projects in terms of delivery, as the retrieval of data for the project needs has become very fast.

"The amount of time and effort that the developer puts into creating the data is huge, and we cannot afford to make reinvestment in the developing time, once something happens to the server. Thanks to StorageTek, the backup of all business-critical data is done automatically," says Mr. Ananthanarayanan. According to him, the downtime has been zero and the solution provides bare-metal recovery — that is, in case of a server crash, it has the ability to restore all configurations, from operating systems to software applications, in just 40 minutes, as proved in mock server crash scenarios.

### Financial benefits

The StorageTek solution totally eliminated the usage of DATs, thus substantially saving storage costs. "Our main objective for installing StorageTek is risk mitigation, as the cost of risk is so huge. We simulated several disaster scenarios, conducted internal audits and found that the system delivers," Mr. Ananthanarayanan says, adding that by enhancing the productivity

of IT projects, the system also contributes to operational cost savings. The drastic reduction in bandwidth consumption also contributes to cost savings. Analysis has shown that the achieved cost savings in storage is as high as 50 percent compared to the costs that GAVS would have incurred had it stayed with the earlier DATs-based solution.

### Technology benefits

The storage solution has facilitated higher levels of information and application access at GAVS and established a proper backup procedure. The transfer of incremental data from the company's headquarters to its disaster recovery site happens at a much faster pace, thanks to the establishment of Fibre Channel connectivity (which boasts of one gigabyte throughput) with the StorageTek solution. The full solution includes a server, disk arrays with 90 gigabytes of hard disk, a virtual tape library and a disk array of 14 hard disks (the D173).

The solution is designed to deliver bare-metal recovery, which means that, "as long as we have the hardware, we can recover all kinds of data and configurations without the need for reinstallation — thanks to the mirroring feature of the solution that takes backup of operating systems and applications."

GAVS handles 100 gigabytes of incremental data a month and has the capacity to deal with up to 400 gigabytes. "We don't have to check which tape contains what data ... the system is able to detect where the files are stored," says Mr. Ananthanarayanan.

The system makes use of redundant array of inexpensive disks (RAID) configuration and a Fibre Channel backbone for interconnectivity (the earlier one had Ethernet connectivity), making the management of the network traffic efficient and easy. Furthermore, since the data is stored centrally in a backup exchange server, a replica copy of the entire data is always available.

#### StorageTek performance metrics summary

Goal	Before StorageTek solution	After StorageTek solution	Result
Back up mission-critical information	Backups were taken on DATs	60 minutes	Able to more comfortably meet mandatory disaster recovery requirement.
Restore applications and data quickly	Mostly stand-alone backups with unreliable restores	Centralised backup with data protection and faster restorations	Backup times reduced by more than 80 percent
Save on costs	20 DATs were used	40 LTOs are used now	Freed manpower resources and reduced DATs from 20 to nil.

Case study company: **GAVS Information Services Private Limited**  
[www.gavsinfo.com](http://www.gavsinfo.com)

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Mr. Ananthanarayanan, Network Manager, GAVS

### About GAVS

GAVS is an information technology outsourcing leader headquartered in Chennai, India. It has offices in the U.S., U.K. and Middle East. Its ability to consistently offer world-class services and innovative software solutions has earned GAVS a distinguished list of global clientele. The company is affiliated with the Software Technology Park of India (STPI) and is a member of the National Association of Software Companies (NASSCOM) in India.

### ABOUT STORAGETEK

Storage Technology Corporation (NYSE: STK) is a \$2 billion global company that enables businesses, through its information lifecycle management strategy, to align the cost of storage with the value of information. The company's innovative storage solutions manage the complexity and growth of information, lower costs, improve efficiency and protect investments. For more information, visit [www.storagetek.com](http://www.storagetek.com), or call 1.800.275.4785 or 01.303.673.2800.

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Replacement parts provided under warranty or any service offering may be either new or equivalent-to-new, at StorageTek's option. Specifications/features may change without notice.

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