

Explore the TechTarget Network at [SearchTechTarget.com](http://SearchTechTarget.com).

[Activate your FREE membership today](#) | [Log-in](#)



Search this site and the Web

Powered by

[HOME](#) [NEWS](#) [TOPICS](#) [ASK THE EXPERTS](#) [TIPS](#) [DISCUSSIONS](#) [WEBCASTS](#) [WHITE PAPERS](#) [PRODUCTS & VENDORS](#) [CAREERS](#) [SITE MAP](#)

ADVERTISEMENT

**VENDOR OFFER** TechTarget Conferences, the most targeted events for today's top enterprise IT pros. [View full schedule of upcoming topics and dates!](#)

[Home](#) > [Tips](#) > [Storage Innovators](#) > Storage network...

[EMAIL THIS PAGE TO A FRIEND](#)

## Storage Tips & Newsletters:

[TIPS & NEWSLETTERS](#) [TOPICS](#) [HALL OF FAME](#)

Search for:  in   Full TargetSearch with Google

### STORAGE INNOVATORS

#### Storage network centralizes tape backup

Michael Alexander

30 Jan 2002

Rating: -5.00 - (out of 5)

**SITE SPONSOR**

For MGM Mirage's IT department, managing tape backup in the company's fast-growth climate was once as tricky as orchestrating a pirate battle at Treasure Island, one of the company's Las Vegas resorts.

EXPLORE THIS AREA: RICH-MEDIA ADVERTISEMENT

Before 1999, the tape backup operation was decentralized across five sites on three continents. "We were backing up 60-80 gigabytes per site," recalled Ron Pavan, senior systems engineer for MGM Mirage. "It took a dedicated person per property to monitor the backups and do the tape exchanges. Also, since we weren't completing our backups within a 24-hour window, we didn't have reliable disaster recovery."

Meanwhile, the company was steadily acquiring properties, including MGM Grand's acquisition of Mirage Resorts in 2000. Today, MGM Mirage operates 19 casino properties across the U.S. and in Australia and South Africa.

"We realized as a company we were getting so large that we needed to have a centralized operation," Pavan said. A corporate mandate to consolidate computer facilities at our five sites around the world and reduce staffing provided the catalyst to act.

In early 1999, the IT department deployed a SAN designed to give it control of its tape backup and disaster recovery operations. Data from the five sites is now funneled over the SAN to the company's Las Vegas headquarters, to a StorageTek PowderHorn tape silo. By centralizing backups over a SAN, the IT team was able to cut the backup window to 12 hours.

As MGM Mirage continued to grow, with its data doubling every six months, the company deployed four additional SANs.

In 2000, the IT team began looking for ways to lower the expense of offsite tape storage and enhance its disaster recovery capabilities. "We knew one of the few ways we could do this in a fast manner was on a SAN located at two different properties," Pavan said.

MGM invested in a second PowderHorn tape silo and set it up in a facility four miles from the first. Now, data is backed up to tape in one silo, and then copied to tape at the second silo.

Today, Tivoli Storage Manager controls the entire tape backup process using a progressive backup methodology. "You do incrementals forever," Pavan said. "When we were backing 600 gigs a day, that was full backups. We've doubled the data and now we're only doing incrementals. If we had to do full backups every day, we would be up into the 9 terabytes a day range."

There are approximately 3000 tapes split between the two facilities. "Tivoli Storage Manager keeps track of what data is on what tape and the backups are done automatically," said Pavan. "You have the operations department monitoring it for failures and if needed, they perform corrective actions and then go about their business." Failures are infrequent, he adds.

On tap is a plan to move to "LAN-free backups," Pavan said. "We have StorageTek with a backup recovery SAN, and we have four other SANs



that are data storage SANs. Our goal by midyear of 2002 is to link all of these SANs and start transferring our backup data over the Fibre Channel instead of through the corporate network." Keeping the data off the corporate network will ensure users will be getting optimal response time on the network.

"We're at 1.4 terabytes today," commented Pavan. "Six months ago we were at 800 gigs a day. Who knows where we're going to be six months from now. So we're trying to be proactive."

For more information about MGM Mirage, visit its [Web site](#).


For additional information about StorageTek, visit its [Web site](#).


### For More Information

- SearchStorage Best Web Links: [Backup](#)
- Share your storage networking experiences and post questions in our searchStorage [Storage Networking Forum](#).
- Ask searchStorage expert Jim Booth a [backup/recovery question](#).

DISCLAIMER: Our Tips Exchange is a forum for you to share technical advice and expertise with your peers and to learn from other enterprise IT professionals. TechTarget provides the infrastructure to facilitate this sharing of information. However, we cannot guarantee the accuracy or validity of the material submitted. You agree that your use of the Ask The Expert services and your reliance on any questions, answers, information or other materials received through this Web site is at your own risk.

Do you like this tip? [Email](#) your opinion or rate the tip:

 Rate this Tip: In order to rate this tip, you must be a registered member of searchStorage.com

 [Register now](#) to start rating these tips

Already a member? [Log In](#)

 [Free tips via email](#)

### LATEST TIPS & NEWSLETTERS

>> [SD2003: NAS user case study - consolidation strategies that work](#)

 **WHAT'S NEW**  
on searchStorage

- >> [University learns SAN lesson](#)
- >> [Tape SAN gets good rating from credit analytics company](#)
- >> [SAN scores high ratings for Nielsen Media Group](#)
- >> [Stock exchange bullish on SAN](#)

1. [New Cisco Resource Page](#)
2. [Your one-stop shop for networked storage](#)
3. [Gain access to thousands of job listings](#)
4. [Spotlight on SAN/NAS convergence](#)

**Feb 11-13, 2004 in Atlanta**

• Keynote by CRM Guru Don Peppers

  
Brought to you by  
TechTarget Peppers&RogersGroup

STORAGE MARKETPLACE

 GET YOUR PRODUCT OR SERVICE LISTED HERE

[Gateway Servers on Sale Now - Save up to \\$400](#)

Save up to \$400 on select Gateway tower and rack mount servers featuring powerful Intel Xeon processors. Limited time only.

[DVD-R \\$0.81, DVD-R 2x \\$0.95 w/ Free Shipping](#)

Shop4tech offers great pricing and selection on all DVD media. DVD-R 4x \$0.85 each, DVD+R 2.4x \$1.05 each, DVD+R 4x \$1.05 each, DVD-RW \$0.99 each, and DVD+RW 2.4x \$1.39 each. Order now and receive free shipping within contiguous 48 states.

[Mid-Range NAS Solutions from Meridian](#)

DataNAS represents the latest in departmental NAS Filer technology. Each DataNAS is built with simplicity, fault tolerance and performance in a system designed for reliability and longevity. The DataNAS employs the latest IDE hard drive technology and NAS software to keep costs low while maximizing your return on investment.

[Overland Storage - Network Storage](#)

With Overland's products, services and solutions you'll be able to better manage, protect, control, allocate and utilize information assets.

[Never Lose Email! Storactive LiveServ for Exchange](#)

Storactive LiveServ's continuous, zero-loss backup eliminates Exchange data vulnerabilities and ensures rapid recovery of individual emails on up to entire data stores. Enables full recovery of data up to the moment a loss occurred. Get free info!

[The Quick Guide to Windows Server 2003. Get the latest information on installation, new features and training. Click here!](#)

[Try a free session of the new Microsoft Visual Studio .NET 2003--no download required. http://msdn.microsoft.com/vstudio](#)

 GET YOUR PRODUCT OR SERVICE LISTED HERE

[HOME](#) [NEWS](#) [TOPICS](#) [ASK THE EXPERTS](#) [TIPS](#) [DISCUSSIONS](#) [WEBCASTS](#) [WHITE PAPERS](#) [PRODUCTS & VENDORS](#) [CAREERS](#) [SITE MAP](#)

[About Us](#) | [Contact Us](#) | [For Advertisers](#) | [For Business Partners](#)

SEARCH

SearchStorage.com is part of the TechTarget network of industry-specific IT Web sites

**APPLICATIONS**

SearchCRM.com  
SearchSAP.com

**DEVELOPMENT**

SearchVB.com

**ENTERPRISE IT MANAGEMENT**

SearchCIO.com

**CORE TECHNOLOGIES**

SearchDatabase.com  
SearchMobileComputing.com  
SearchNetworking.com  
SearchOracle.com  
SearchSecurity.com  
SearchStorage.com  
SearchWebServices.com  
WhatIs.com

**PLATFORMS**

Search390.com  
Search400.com  
SearchDomino.com  
SearchEnterpriseLinux.com  
SearchWin2000.com



[TechTarget Enterprise IT Conferences](#) | [TechTarget Corporate Web Site](#) | [Media Kit](#)

Explore [SearchTechTarget.com](#), the guide to the TechTarget network of industry-specific IT Web sites.

**All Rights Reserved, Copyright 2000 - 2003, TechTarget**

[Read our Privacy Statement](#)