



### About Virgin Atlantic Airlines

- Founded in 1984, Virgin Atlantic serves 22 destinations, owns a fleet of 29 aircraft, and has won many of the world's top business, consumer and trade awards.
- Originating 20 years ago from the seed of an idea to start up a new airline service in 90 days or less, Virgin Atlantic today is recognized as a leading, multinational air services corporation.
- 120 of Virgin's total 140 IT employees are based out of Virgin's Gatwick headquarters in the U.K.'s West Sussex region.

### Goals for data protection

- Ensure adequate backup across multiple offices across the globe
- Reduce time spent "fire-fighting" and tracking backup performance
- Optimize use of current IT assets
- Forecast future data protection needs

### Results

- Reduced backup monitoring time, reallocated staff to higher level work
- Achieved 25 percent improvement in backup success rates
- Gained visibility of overall backup system's health and welfare
- Increased utilization, throughput of current servers and tape drives

### SITUATION: Airline's Push to Reach New Heights Brings Renewed Focus to Data Protection

Virgin Atlantic Airways is the second largest airline in the United Kingdom, with services to over 22 destinations -- including its London hub, nine U.S. cities, and destinations as diverse as Hong Kong, Johannesburg, Lagos and Barbados.

Founded over 20 years ago by entrepreneur Richard Branson of Virgin Records' fame, Virgin Atlantic today continues to live by its original mission: To offer a combination of fun, innovation, high quality and exceptional value to its customers. Now poised for rapid expansion into new markets, the company has also made it a goal for all employees to work smarter, cut costs wherever possible and make every dollar spent count toward substantial cost savings.

### Moving IT from Fire-Fighting to Planning for the Future

According to Tim Graham, team leader of Virgin Atlantic's Data Systems Management group, translating the company's initiatives into his own team's data protection efforts has taken several forms.

Graham and his team are part of the 140 employees that comprise Virgin Atlantic's IT group. This group supports the systems and data in use by Virgin's 7,000+ employees at the company's three divisions: Virgin Atlantic Airways, Virgin Atlantic Engineering, and Virgin Atlantic Cargo. In addition, they manage backup at Virgin Atlantic outposts across the world.

Graham's team routinely backs up an average of 5 Terabytes of critical company data each week. The team also oversees the IT Helpdesk system, various event monitoring systems and advises the IT department on new and upcoming technological advances that could help streamline IT operations.

Driving to work smarter, cut costs and invest only where they could obtain the greatest ROI meant finding ways to reduce the time involved in monitoring backups and troubleshooting backup-related errors. It also meant learning how well they were doing at protecting important data on various local and remote servers across the globe. And, it meant performing more proactive -- doing capacity planning, forecasting and recommending how best to upgrade the company's 3-year-old backup infrastructure in order to accommodate Virgin's current and future data growth needs.

Succeeding was no easy task. "We needed to get a grip on what was or wasn't working," said Graham. "It was difficult for us to know what was going on -- other than firefighting on a daily basis." When he embarked on the mission to improve his team's data protection efforts, Graham had one full-time employee devoted solely to monitoring backup performance across the company's various divisions.



## The Complexity Quotient: Dispersed Data, Disparate Systems

One of the main data protection challenges was tracking backups or performing restores on data housed at Virgin's remote offices, based in airports around the world. This data could range from typical Microsoft Office documents to databases containing information about Virgin's customers and frequent flyer program.

Graham's data protection efforts were made considerably more complex due to the dispersed nature of the data and the fact that it often resided on a combination of Unix, Windows NT and Novell Netware servers. Like many other large, geographically dispersed companies, Virgin used a combination of backup software products to protect its data. In the U.K., they were using VERITAS NetBackup for their NT, Unix and Netware systems. The U.S. office used VERITAS Backup Exec. And, all of Virgin's airport offices used CA's BrightStor ARCserve backup product.


To help monitor and correct backup performance, Graham's team often relied on VERITAS Global Data Manager's Activity Monitor feature. While Activity Monitor allowed them to assess the company's VERITAS-related backup activities, Graham said there were still gaps in assessing how well backups on other systems were performing – especially when attempting to restore data or check on the status of backups at Virgin's many remote offices.

As often happens with satellite offices, tape-based backups were supposed to be performed routinely by the site's administrative staff. When remote offices needed to restore their data, however, Graham's team discovered tape drives no one knew about. In one instance, data had not been backed up for 3 months.

Checking the status of remote backups was a painful process. "In the UK, it was easy to see what was going on. But, in order to see backup processes in the Caribbean, we had to remote control a PC on a slow WAN link. It would take hours," Graham said. Another backup problem cropped up when Graham's team inadvertently learned that critical servers on the network had been added or moved within the company and were not part of any backup procedures.

The end result: Graham and his team devoted inordinate amounts of time to backup-related activities. As they endeavored to back up current data, he looked at ways they could improve on their overall backup infrastructure.

One thing became clear: They needed more visibility into how their current backup processes were performing across the board. And, they needed to learn more about how well they were using their current data protection-related hardware and software assets, such as servers and tape drives.





## **Solution: BackupReport® Saves the Day, Shows Strong Return on Investment**

A consultant was enlisted to help Graham and his team determine ways they could improve on their data protection efforts. He suggested BackupReport as a means to give Graham both high-level visibility of all their current backup operations as well as more granular reports that could demonstrate obvious backup gaps and ways to improve asset utilization.

Within an hour of installing a trial version of BackupReport, Graham began receiving data on the success and failure of various backup processes. “Almost instantly we could see the benefits and what it could do for us,” he said. Within the first few days, as they reviewed the data produced by BackupReport, they realized that many of their backup processes were not backing up data successfully.

Graham saw the instant advantage to using BackupReport, and his next step was to convince management that investing in this type of tool would save Virgin Atlantic considerable time and money. “The airline industry has always been a high expense, low-margin business. Every penny we spend has to show a real cost savings,” he said.

Using data generated by BackupReport, Graham was able to demonstrate how the product could help Virgin identify its current utilization rates of servers and tape drives as well as ways they could increase utilization. Before BackupReport, Graham noted, “There was no real way of finding throughput on servers and drives.”

“We were struggling to back up the amount of data and looking at ways to improve the backup infrastructure. We needed to invest in more hardware,” he said. “[With BackupReport], we got visibility on how much of the hardware we were actually using, then used that to plan for data growth. We aren’t just guessing. We now have figures and can do proper projections.” Management was convinced.

Based on BackupReport data, Graham instituted key changes that he estimates quickly raised overall backup success rates from about 60 percent to well over 85 percent. In time, Graham hopes this figure will increase further.

With BackupReport now running, the team discovered several orphan servers (through the Orphan Report feature) that were not being backed up at all. “We found a few servers we didn’t know existed,” he said. “In the U.K., servers are added and servers are taken away in other facilities. They may not tell us they have done that. We rely on BackupReport to show us if a server has not been backed up for a week and we can go check the status.”

It didn’t take long to recognize BackupReport’s immediate value to the entire organization. His team has instituted Web-based reports based on BackupReport data that allows various IT and non-IT staff members to see updates on backup performance on a regular basis – at anytime, from anywhere in the world.

***“Backup Report has meant that we spend less time on firefighting and more time on higher value work. We’ve been able to concentrate more on project work...planning for the future and seeing we have the right hardware in place. We can now work on other systems and are not slaves to backups day in and day out.”***

*Tim Graham, Team Leader, Virgin Atlantic’s Data Systems Management*



BackupReport now gives Graham and his team a better overview of backup operations. They have been able to see potential backup scheduling issues and make the necessary changes from the data found in just a few of the product's core and custom reports – such as the Success and Failure Report – and job queue times before getting tape drives free to use.

The UNIX support team used to spend inordinate amounts of time backing up the company's Oracle database and analyzing related backup log files. According to Graham, BackupReport has allowed them to dramatically improve their productivity. "Their time has been cut drastically because they can see a lot of what they need through BackupReport."

On his own team, Graham's also noticed significant timesavings. "From a backup monitoring point of view, one guy spent every hour of every day looking at backups. He's now spending one-third to one-half the time looking at backups. The rest of the time he now spends projecting [for future growth]. He's produced invaluable data for infrastructure planning." Plus, said Graham, "I don't have to be involved all the time in backup. I can dip in and out of BackupReport, and see at a glance what's going on. The product's been very easy to use. I can get the information I need quickly. And, it's been very easy to configure if I need a custom report."

How much did BackupReport contribute to helping Graham and his team realize their original objectives? "There's a big drive to cut costs, increase productivity and be smarter with how we are spending our money. BackupReport has meant that we spend less time on firefighting and more time on higher value work," he said. "We've been able to concentrate more on an infrastructure project, planning for the future and seeing that we have the right hardware in place."

In the final analysis, Graham gives BackupReport his highest marks and notes, "We can now work on other systems and are not slaves to the backups day in and day out."



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