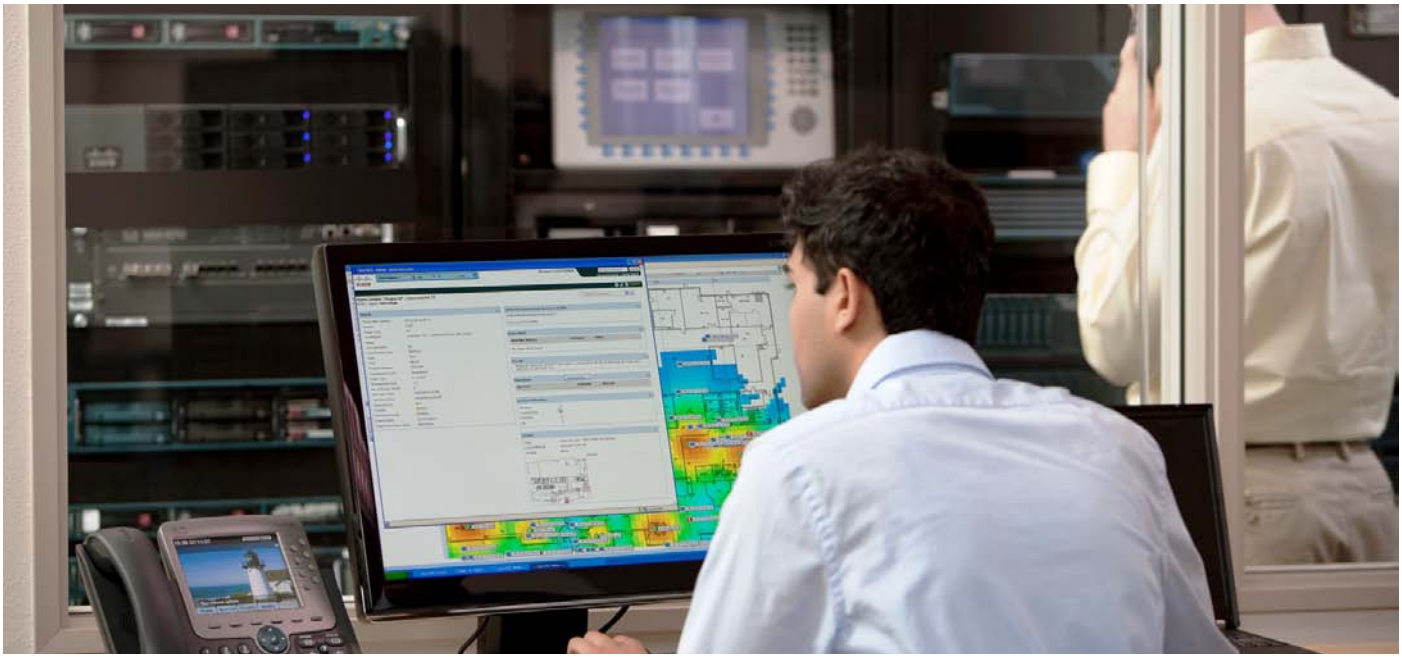
Hosting Provider Optimizes Infrastructure

Customer Case Study



Atlanta Technology used Cisco data center switching to improve efficiency and enable business growth at lower cost.

EXECUTIVE SUMMARY

Customer Name: Atlanta Technology

Industry: Information Technology

Location: UK

Number of Employees: 18

Challenge

- Optimize use of data center assets
- Simplify infrastructure
- Support new strategic direction

Solution

- Cisco Nexus 5000 Series Switches with built-in Fibre Channel over Ethernet

Results

- Increased virtual machine density by 30–40 percent
- Reduced capital and operating costs
- Gained technology showcase and competitive advantage

Challenge

In late 2006, brothers Mike and Simon Kelson decided on a strategic change of direction for their company, Atlanta Technology. In addition to selling and supporting customer-owned IT infrastructure, they started investing in their own infrastructure in order to offer businesses hosted and managed services. Today, although the company is still operating as a value-added reseller of hardware, the balance is shifting in favor of services such as disaster recovery, cloud computing, and storage and server virtualization.

"We now have a platform that allows us to offer different alternatives to customers," says managing director Simon Kelson. "The new services grew very quickly in our installed customer base, and now we're winning new business with them too."

It's a different approach that enables Atlanta Technology to target any size of company, from a one-person startup to organizations with hundreds or thousands of employees. Business volumes are increasing steadily, and Simon believes that much of the current demand in the market is driven by necessity, with companies unable to delay investment any longer as the effects of the recession linger.

Atlanta's infrastructure consists of physical servers, each hosting several virtual machines. It was possible to scale up the infrastructure by adding memory and processing power to the servers, but Atlanta soon reached a limit on the number of virtual machines that could operate on one physical host. The blockage was caused by input/output (I/O), meaning the connections between the servers, the network, and the storage devices.

"We wanted a higher density of virtual machines without adding extra cabling, which pushes up energy costs and makes maintenance more difficult," says Mike Kelson, technical director. "We started looking at unified I/O, because it would allow us to run network and storage traffic over the same cabling."

"As a managed service provider, driving higher densities into our servers has a direct impact on our bottom line, because we're making more money on our infrastructure."

Simon Kelson
Managing Director
Atlanta Technology

Solution

Mike considered two different vendors' solutions, and decided that one of them was too expensive because it was designed for much larger data centers than Atlanta's. It was also a proprietary solution, which was unlikely to yield as good a return on investment as more standards-based technology.

Cisco Nexus® 5000 Series Switches, on the other hand, were better suited to Atlanta's needs, both in terms of design and pricing. As Ethernet switches, an established industry standard, they would have an acceptable lifecycle and would also be easier for Atlanta's engineers to manage and support. "Buying Cisco was an advantage because we already have Cisco skills in-house," says Mike. "We also liked the technology so much that we waited for six months until it became available."

Choosing Cisco also enabled Atlanta to take advantage of the Cisco® Data Center Business Advantage, an architectural framework that unifies all Cisco solutions for the data center and connects technology innovation to business innovation.

Atlanta installed Cisco Nexus 5000 switches in its primary data center and another in its disaster recovery data center. The company was already using Cisco Ethernet switches for its local area network (LAN) and Cisco Fibre Channel switches for its storage area network (SAN). The addition of Nexus systems avoided the need to upgrade the existing switches, and enabled Atlanta to operate with a much smaller Layer 3 switch (the high-performance Ethernet device that manages network routing in the LAN).

The Cisco Nexus 5000 switches are designed to work with converged network adapters (CNAs), which replace the individual adapters that are usually necessary for Ethernet and Fibre Channel connections to each server. This unified fabric is an integral part of Cisco Data Center Business Advantage, and it has reduced the number of cables going into each of Atlanta's servers from a maximum of eight down to only two.

Results

The Cisco solution, with its built-in Fibre Channel over Ethernet (FCoE) capability, will cut capital investment in the longer term, because Atlanta will no longer need to purchase, deploy, and maintain as many cables and adapters. FCoE has also simplified the task of Atlanta's engineers, by enabling them to carry out maintenance work more quickly because there are fewer cables to manage and identify.

"It's made life easier because we rarely have to add or move cables now, and we can make changes much faster when necessary," says Mike. "Not only that, the racks also look much neater and present a more professional appearance to any visiting customers or prospects."

Atlanta has achieved its goal of increasing the density of virtual machines on its physical servers; Mike estimates an increase of 30-40 percent so far, and there is potential to improve this even more, leading to other benefits such as reduced power consumption and improved sustainability. Cisco has suggested a figure of 24 servers per kilowatt of power as a realistic outcome of using its unified fabric and Atlanta is already running 19 or 20 servers per kilowatt of power. "We're getting very high densities of processors without having to buy new physical devices or increase our power consumption," says Mike.

"In future, carrying out infrastructure maintenance will be quicker, easier, and less risky. This has huge implications for us, in terms of potential time and cost savings."

Simon Kelson
Managing Director
Atlanta Technology

Another important advantage is the ability to make better use of existing IT assets. "As a managed service provider, driving higher densities into our servers has a direct impact on our bottom line, because we're making more money on our infrastructure," says Simon. He expects the cost of managing that infrastructure to drop even more in the longer term, helping to keep operating costs down and boost profitability. Employee productivity has also improved, because it's possible to absorb higher volumes of business without proportionally increasing the workforce.

The Nexus platform is now becoming embedded in Atlanta's sales processes and the image that it presents to the marketplace. The company is using the platform to showcase its capabilities to customers who are not yet convinced by the cloud computing model, and to differentiate Atlanta from its competitors. "As we sell more of our services, the Nexus will allow us to scale the platform in a way that makes commercial sense," says Simon. "It also gives us the ability to go to customers and say, we're already doing this, so we can do it (and de-risk it) for you too."

Next Steps

At the moment, Atlanta cannot move virtual machines between data centers for maintenance purposes without down time, which can be expensive and inconvenient because maintenance has to take place outside office hours. The Cisco Nexus 5000 switches will drive the dark fibre needed to enable "live" migration and provide enough bandwidth to implement VMware VMotion and Compellent Live Volume, helping ensure that a virtual machine migrates together with its storage. "Because of the Nexus, we don't have to spend a lot of money on optical equipment and, in future, carrying out infrastructure maintenance will be quicker, easier, and less risky. This has huge implications for us, in terms of potential time and cost savings," says Mike.

For More Information

To find out more about the Cisco Nexus 5000 Series Switches, go to: www.cisco.com/go/nexus5000

For further information about Atlanta Technology, please visit: www.atlantatechnology.co.uk

Product List

Routing and Switching

- Cisco Nexus 5000 Series Switches
- Cisco Catalyst® 3750 Series Switches, with plans to transition to Cisco Catalyst 4900 Series Switches
- Cisco MDS 9000 Series Multilayer Switches

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