ATLANTIS HALTS COSTLY AND DISRUPTIVE DOWNTIME AT HIGH STREET RETAILER

Following its deployment of software-defined storage solutions from Atlantis, Waterstones now enjoys 20x faster desktop performance and has 90% more storage capacity.

The British bookshop chain Waterstones faced two very different but nonetheless pressing challenges in its Citrix-based virtual desktop infrastructure (VDI). Employees at the company's headquarters and regional offices were frequently afflicted by sluggish desktop performance. At their worst, bottlenecks were occurring daily, leading to 5 to 15 minutes of downtime a day for over 100 users. This corresponds to more than 8.5 working hours lost per day, which was both costly and disruptive to the business. Waterstones' IT team traced the problem to the company's storage infrastructure, which was struggling to cope with peaks in traffic.

In addition, Waterstones was aware that it was reaching the limits of its storage input/output (I/O) due to its Citrix farm, a business-critical server environment that it uses to deliver virtual applications to employees based at the company's 275 stores. Alarmingly, the farm generally ran at 90-95% of its I/O capacity. As a result, Waterstones could not afford to increase the number of users or deploy new virtual servers delivering business applications. This naturally presented a constraint on the company's growth.

TOO GOOD TO BE TRUE?

Waterstone's first priority was to resolve the user performance issues. "We were spending a lot of time firefighting and trying to reduce the load on the VDI for our office-based employees," recalls Mike Burtoft, senior infrastructure analyst at Waterstones. "That's when we found out about the Atlantis software, and it seemed too good to be true at first, to be honest. The alternative option would have been to spend a hefty amount of money on more NetApp hardware, and, for the amount we spent on Atlantis, we wouldn't have got anything remotely powerful enough."

CHALLENGES
- Resolve desktop performance issues and prevent downtime
- Increase storage capacity to support business growth

SOLUTION
- Atlantis USX

BENEFITS
- 20x faster desktop performance
- No more downtime for office-based staff
- Latency decreased to less than a millisecond
- Significant drop in IT helpdesk calls
- 90% more storage capacity in Citrix farm
- More than 25% of servers decommissioned to reduce costs
- Greater scalability to accommodate business growth

"All the performance problems went away immediately."

Mike Burtoft, senior infrastructure analyst, Waterstones

20X FASTER DESKTOP PERFORMANCE

Waterstones selected a software-defined storage solution from Atlantis and used it to bolster the existing NetApp storage associated with its Citrix XenDesktop VDI for head office and remote office users. The migration to Atlantis was achieved easily, with support from Atlantis UK, during business hours and with absolutely no impact on users. "All the performance problems went away immediately," says Burtoft. "We've not looked back."

Tests conducted by Waterstones have revealed that desktop performance has in fact improved by a factor of 20, while latency is now minimal. Burtoft explains: "Before we installed Atlantis software, head office desktop performance measured 8,000-10,000 IOPS in total; this has been boosted to 210,000 IOPS (35,000 for each of our six server hosts). At peak times, we recorded latency of 30-100 milliseconds; now we don't even need to monitor latency as we know that it is always under a millisecond."

90% MORE CAPACITY FOR GROWTH

Following the unequivocal success of Atlantis software in its VDI for office employees, Waterstones decided to deploy another Atlantis solution to underpin the Citrix XenApp infrastructure that delivers internal applications to 1,500 computers at stores. The company wasn't expecting to see a big user impact as it wasn't aware of any particular performance issues with Citrix XenApp or the underlying NetApp storage. However when it deployed Atlantis, "the performance of the platform went from being reasonable to all of a sudden being crisp and rapid," according to Burtoft.

Most significantly, the use of Atlantis immediately reduced the NetApp storage consumption from 90-95% to 10-15%, freeing up 85-90% of the available storage capacity in the VDI. "Atlantis has extended the life of our Citrix farm and associated NetApp storage and given the business the capacity to grow in the future," states Burtoft. "Since we deployed Atlantis, we have been able to cut the number of servers in our Citrix farm from 70 to 50, reducing our storage space requirements by more than 25% while still giving users in stores better performance."

RELIEF FOR THE IT TEAM

Within Waterstones' IT team there is a huge feeling of relief that the user performance and capacity issues have been resolved. As soon as the Atlantis solution went live on the head office VDI, "there was a massive reduction in the number of calls to the helpdesk," Burtoft says. "This frees up our time to focus on supporting users in stores with issues that might impact directly on sales."

He concludes: "Atlantis works so well that there isn't really any day-to-day management. It just sits there and works."

VIRTUALISED IT ENVIRONMENT

- Citrix XenDesktop
- Citrix XenApp
- NetApp File Storage
- Atlantis USX, diskless storage solution
- VMware ESX

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