Previously, Paratus AMC had difficulties running a virtual desktop infrastructure (VDI), leading to performance complaints from employees. So the IT team switched to a flash array from Pure Storage, which had the power to outperform the mechanical disk arrays it had been using. Performance was fantastic, with Paratus developers choosing to migrate to VDI – previously they had resisted, citing storage issues and poor response times.

Paratus AMC

BUSINESS TRANSFORMATION

Removal of all virtual desktop infrastructure issues, with flash storage easily outperforming spinning disks.

GEO

United Kingdom

INDUSTRY

Financial services

"Since we picked Pure Storage, we've fully migrated VDI, moved our SQL Server on to Pure, and now the database administrators in our team are asking if there's a bit more room for their systems."

Chris Lomas,
IT Infrastructure Manager at Paratus AMC

Paratus AMC is a mortgage asset management provider with a presence in the UK, Spain and Germany. It administers mortgages by managing repayments, remortgages, insurance and, if necessary, repossession.

TURNING A VDI ENVIRONMENT HINDERED BY MECHANICAL DISKS INTO A STAR PERFORMER

Paratus AMC has a heavily virtualized footprint of about 200 servers and 250 virtual desktops serving 130 users in the UK and a further 80 in Germany and Spain. A number of business partners also connect to Paratus AMC's VDI environment. The entire environment ran on hard disk arrays – and it showed. The company is a heavy Microsoft SQL Server user with both SQL Server 2008 and 2012 in production. Custom applications are also developed in-house and deployed using VDI.

"Our heavy-duty SQL servers and VDI desktops were degrading in front of our eyes – logon storms and grey screens were an everyday fact of life, and we measured response times of up to 120ms on VDI," says Chris Lomas, IT Infrastructure Manager at Paratus AMC.

"There were periods of time where the system was extremely slow," says Lomas. "We had constant performance complaints from our employees, and as IT we weren't offering a good service to our internal users.

"Treating customers in a rigorously fair manner is central to our culture. Therefore, we had an urgency to act before the situation could impact our customers."

RETIRE THE MECHANICAL DISK ARRAYS TO A DISASTER RECOVERY ROLE AND LET FLASH SAVE THE DAY

Lomas and his team put a case to the company's board for replacing their existing mechanical disk arrays. Intensive reconfiguration work had kept the HDD arrays limping along – but also hampering the case for switching to an array that would outperform the incumbent without intensive, time-consuming fine tuning and regular hiccups.

Paratus AMC worked with integration partner Softcat, which provided the conclusive answer, suggesting a Pure Storage 405 All Flash Array, and specifying it with 5.5TB of raw storage to supplement a 110TB HDD array.

COMPANY:

Paratus AMC
http://www.paratusamc.co.uk

USE CASE:

- Virtualisation

CHALLENGE:

- High latency slowed VDI
- Productivity hampered by logon storms
- Outages of up to an hour at a time caused by legacy disk

IT TRANSFORMATION:

- Two datacentres running VMware vSphere
- 5.5TB Pure Storage FlashArray 405
- Condensed 24u array to 4u
- VDI deployments outperform traditional desktops
- Adding a virtual disk to a server takes seconds – instead of 90 minutes

"The deduplication and compression is amazing – we can put on more than we thought possible. And the interface is simply so much better. The admins love it and the users love it."

Chris Lomas,
IT Infrastructure Manager at Paratus AMC

Lomas also looked at a hybrid array. "We did a little research and found that we couldn't get guaranteed response times on a hybrid array if it was getting hammered," he says. "With no breaks in the working day to flush the cache, we risked spending a considerable amount on a hybrid array, only to have it fail to deliver, just like a traditional hard disk array."

The team noticed that there was little let-up throughout the day. Users in Spain – an hour's time zone difference from the UK – would log on, then be able to tell when the UK team came into the office: their VDI desktops would start to lag almost to the moment the UK clocked on for work.

"We looked specifically to address the VDI problem, but we also had in mind to move other elements of our estate to new, faster storage," says Lomas. "Since we picked Pure Storage, we've fully migrated VDI, moved our SQL Server on to Pure, and now the database administrators in our team are asking if there's a bit more room for their systems."

The old mechanical disk arrays are now taking on tasks where response time isn't so critical. The Paratus AMC team is looking to move the arrays to a disaster recovery role and add more Pure Storage arrays for a wider range of tasks at the company.

A RADICAL CURE: REDUCE LATENCY BY 120X TO 1MS WITH PURE STORAGE

The team took delivery of its new Pure Storage array on a Friday and started migrating test servers over the weekend. They were quickly followed over the next week by production servers and desktops during the following week.

"We liked the Pure Storage array from day one – and the lack of complaints from users is a big, big indicator," says Lomas. "The user interface is simple to use – we didn't need a manual – and we had capabilities and IOPS far in excess of our needs. The user interface saved us literally days: adding disks to a server could take up to 90 minutes with the old arrays, because of the speed of the user interface for its management console. Now it takes a few minutes. Multiply that by the number of servers we have, and you'll get an idea of how welcome the Pure Storage array was."

The Paratus AMC team had got used to coming in to work to see maxed out storage graphs. Now, latency is down to about 1ms on writes in VDI, and usually registers below. Occasionally, says Lomas, it might go up to 4ms. This compares to 120ms typical latency for the old arrays. Data reduction runs about 7.7 to 1.

The real acid test for the team, however, was the developers' machines. Paratus' developers had resisted moving to VDI, citing storage issues and poor response times. With Pure Storage, VDI outperformed their fat clients. The developers went from avoiding a migration to VDI to requesting migration.

"Performance is fantastic," says Lomas. "I know in the morning I can come in, and storage won't be a problem. There's no need to zone across a SAN, no need for spreadsheets to understand what goes where. The deduplication and compression is amazing – we can put on more than we thought possible. And the interface is simply so much better. The admins love it, and the users love the improved response times."

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