

## Paragon Group refreshes its IBM server and storage infrastructure with Northdoor

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Alec Marsh, Change Director, Paragon Group

### About Paragon Group

Founded in 1985, the Paragon Group of Companies is a FTSE 250 listed specialist provider of finance for individuals. Across its three core businesses - Paragon Mortgages, Idem Capital and Paragon Bank - the company employs more than 1,250 people and has serviced over 1.5 million customer accounts.

### Scaling up to tackle business growth

Paragon is a highly dynamic organisation that continues to grow both organically and through acquisitions. The Group launched its banking subsidiary in 2014, a year which also saw a massive 82 percent increase in its mortgage lending business.

Ongoing growth and changes in the business naturally present challenges to the IT function, which must be prepared to handle whatever the future may bring.

Alec Marsh, Change Director at Paragon Group, explains: “We have to be prepared to adapt to unknown requirements. The business needs to know that it can take timely decisions without having to worry about whether our underlying systems can support the necessary change or expansion. Related to that, our policy is to continually refresh our infrastructure as part of that general readiness.”

-  Completed non-disruptive migration from POWER7 to POWER8-based servers
-  Accelerated overnight batch runs from three hours to one hour
-  Deployed IBM PowerHA, improving and simplifying high availability
-  Gained a stable, secure platform that will support future business growth

Paragon has used the IBM i (formerly AS/400, iSeries) platform to support its core business systems for more than 30 years. The Group uses a number of bespoke applications developed in-house to manage all aspects of loan origination and administration, as well as the third-party Unit4 Financials application (formerly Coda Financials). Alongside its IBM i systems, which run on IBM Power Systems servers, Paragon has a large VMware landscape on Intel servers supporting Microsoft productivity applications, Windows file stores and some ancillary business systems.

“Our existing POWER7 servers were beginning to show the strain as workload grew, especially as we ramped up our use of encryption in response to the increasing threat of cybercrime,” says Alec Marsh. “As this is the most critical element in our infrastructure, we wanted to upgrade to ensure we were ready for the next phase of Paragon’s success.”



Alec Marsh, Change  
Director, Paragon Group

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### Solution components

- IBM Power Systems
- IBM PowerHA
- IBM Storwize V7000
- Northdoor implementation and support services

### Non-disruptive migration

After reviewing the credentials of a number of potential implementation partners, Paragon decided to engage Northdoor plc. to design, size and deploy its new Power Systems landscape. As a long-standing and award-winning IBM Premier Business partner, Northdoor brought to the table both technical accreditation and a close relationship with IBM.

To improve business continuity, Paragon planned to deploy IBM PowerHA, which necessitated the introduction of IBM independent auxiliary storage pool (IASP) technology. “Adopting IASP meant that we needed to make a number of fundamental changes to split our applications from the underlying OS,” comments Alec Marsh. “Having Northdoor’s know-how and insight was helpful as we worked through the necessary changes and escalated technical issues to the right people in IBM.”

While the IASP configuration work meant that this upgrade took longer than previous ones in the Power landscape, Paragon and Northdoor completed it with zero disruption to the business. “Northdoor brought professionalism and commitment to Paragon’s Power Systems upgrade project, and made sure we got the job done,” says Alec Marsh. “Although this was a pure infrastructure project, it’s good that they have long experience of working with City companies, which means they understand our priorities and the pressures we face. We continue to engage them to support the Power landscape.”

### Increased performance with room to grow

One of the major improvements in the new Power landscape at Paragon is the introduction of IBM PowerHA clustering to provide high availability. Previously, the company had used a third-party solution to replicate data between an active and a passive Power server in each of its two data centres.

“In the past, our operators disliked performing switch tests during DR testing: it was a lot of difficult work and it was unreliable,” recalls Alec Marsh. “By contrast, PowerHA is easy to manage and enables us to role-swap between our servers quickly and efficiently, so we’re more confident and can run a true ‘stretched’ data centre rather than active/passive sites.”

A further change is the addition of external storage in the form of two IBM Storwize V7000 arrays, which provide virtualised capacity and automatic tiering of data across a mix of disks to balance price-performance. Paragon uses IBM FlashCopy on the V7000 arrays to take point-in-time snapshots of its production landscape, migrate them to its backup landscape, and run full backups from there—avoiding interruptions, minimising the strain on the network. This also eliminates the negative impact on Recovery Time Objective Paragon previously experienced when it was running backups via logical replication.

The deployment of new servers and storage at Paragon has improved the performance of batch runs—an overnight job that previously took three hours now requires just one—and average processor utilisation has fallen from 75 to 45 percent. In-core cryptography enhancements on POWER8 boost AES performance while cutting the strain on server resources, helping Paragon to increase its use of encryption without impacting business systems.

“Before, the onboarding of large sets of new accounts was becoming intrusive, so the improvement in batch processing is very helpful,” says Alec Marsh. “The business is always accelerating; some years ago, we had nine months to prepare for our first boarding. Today, the target is just six days! Working with Northdoor to upgrade our Power landscape has given us the ability to say to executives: ‘Yes, we can handle that growth’ if they decide to acquire a new loan book with a couple of million accounts.”

