

CASE STUDY

DERBY CITY COUNCIL ACHIEVE 75% REDUCTION IN DATA CENTRE COSTS WITH IT ORCHESTRATION BY CDW™



OVERVIEW

- Derby City Council's public cloud migration ran into financial and technical difficulties due to unsuitable legacy workloads and applications.
- CDW, in partnership with Nutanix, repatriated workloads to a new on-premise data centre, creating a hybrid infrastructure environment which better served the council's financial and operational needs.
- Data centre costs have been reduced by 75% and the performance of applications is up by 40%.

ABOUT DERBY CITY COUNCIL

- The unitary authority for Derby, in the East Midlands, provides services including highways and transport, affordable housing, community and living, education, health and social care and community regeneration projects.
- With a workforce of over **6,000** people, it is one of the city's largest employers.
- Its vision is for Derby to be a safe, strong and ambitious city.

CHALLENGE

A combination of pressures prompted Derby City Council to review its on-premise data centre strategy in 2015. Not only was its facilities management contract for managed IT services and data centre up for renewal, but there were also financial restraints to contend with.

The council opted to migrate all of its workloads into the public cloud in order to reduce budgetary pressures, remove the burden of data centre management and operate within a more flexible IT environment.

However, the migration quickly encountered challenges. It became abundantly clear that key legacy applications, which were never designed to run in the cloud, would consume more resources and incur more costs when hosted in a public cloud environment than anticipated. Additionally, there were technical limitations preventing some applications from being migrated.

Alistair Taylor, Project and Change Manager at Derby City Council, explains: "Price escalation, plus the need to purchase more resources than anticipated, meant that by the time we had migrated around half of our data centre workloads, the operational costs were already double what we had projected for the entire project."

Additionally, the operator of the council's on-premise data centre implemented a price increase, which accelerated the need for an alternative plan.

"What we needed was a more flexible, hybrid solution, leveraging the public cloud where appropriate, but with the ability to also manage legacy workloads on our modernised, on-premise infrastructure," says Alistair Taylor.

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— Alistair Taylor, Project & Change Manager at Derby City Council

SOLUTION

CDW was invited to support the council by developing a plan to help overcome its infrastructure challenges. The first stage was a detailed analysis of the existing data centre architecture, including an in-depth assessment of the legacy hardware, of which some could be retained, and other elements required replacement.

In phase two, CDW developed a hybrid strategy that would provide the council with a complete modernised infrastructure solution, harnessing both on-premise and public cloud capabilities that would balance performance requirements and cost control.

After a period of technology trials and testing, the Nutanix Enterprise Cloud Solution was selected as the best fit for the council's needs. This solution unlocked the same scalability and pay-as-you-grow economics as the public cloud, but in a format better suited to Derby City Council's workload mix.

"We were impressed by both the scalability of the Enterprise Cloud Solution and also its hypervisor neutrality," says Alistair Taylor. "This would enable us to migrate away from our legacy virtualisation platform and make even more savings."

“ Migrating workloads back to on-premise is less common and more complex, requiring development of custom migration tools. This is something we couldn't have done without the help of an expert partner like CDW. ”

— Alistair Taylor, Project & Change Manager at Derby City Council



The solution enabled full virtualisation at a lower cost through migration of VMs to Nutanix AHV hypervisor. The council also gained integrated control of physical and virtual resources with Prism, the Nutanix central management console.

The initial configuration recommended by CDW, a Nutanix Elite partner, was a 13-node Enterprise Cloud cluster. This accommodated the council's data centre workloads that could not be moved into the public cloud, while immediately reducing the required rack space by almost 40 percent with corresponding reductions in power and cooling overheads.

Once the existing server workloads had been secured, CDW turned its attention to the workloads that had been migrated to the public cloud. The council purchased a further 13 nodes, 7 of which were provisioned to take advantage of the Nutanix AHV hypervisor to further reduce licensing costs.

Working closely with the council's internal IT specialists, CDW managed the rare and complex process of reversing elements of the migration by restoring hundreds of workloads and applications from the public cloud back to the on-premise data centre. The significant expertise, consultancy and design services of CDW proved crucial in the successful completion of this phase within just four months.

Lee Hendra, Solutions Sales Director at CDW, says: "Migration into the public cloud can be complicated but migrating back on-premise is much more technically challenging and can be costly if not done correctly – a common challenge being faced by many cloud adopters. Working closely with the council, we created a very efficient methodology to bring the right workloads back on-premise with minimal risk to service levels whilst reducing the overall cost."

OUTCOME

CDW helped Derby City Council repatriate almost all of its 400+ workloads, leaving just three in a public cloud environment. The council chose to retain public cloud services to meet its email and office productivity requirements using Microsoft Office 365. The relocation of the council's on-premise data centre to a more affordable provider has also been completed.

The combined impact of the transition has boosted performance and brought down costs. Measurement of application performance suggests a 40 percent improvement in user experience. The project has also reduced the council's annual data centre running costs from over £200K to less than £37.5K. Looking ahead, the council expects to realise total IT savings of around £1.7 million over the next five years, compared with the projected costs of the original public cloud plan.

"With lots of tools and technologies available, moving applications to a public cloud platform is relatively straightforward," Alistair explained. "Migrating workloads back to on-premise is less common and more complex, requiring development of custom migration tools. This is something we

couldn't have done without the help of an expert partner like CDW."

Moving forward, Derby City Council intends to migrate all remaining workloads to the Nutanix AHV Hypervisor technology solution, further lowering costs by eliminating the licensing overheads. The council is also planning to leverage the resilience of the Enterprise Cloud architecture to provide for disaster recovery and data protection requirements. There are also long-term plans to enable network segmentation using AHV and Nutanix Flow, to build a more flexible software-defined infrastructure.

Neil Bailey, Head of Sales – Education, Local Government & Housing at CDW, says: "This project illustrates that public cloud is not a silver bullet that can be applied in every situation. Derby City Council discovered the challenges that public cloud can bring first hand. By working very closely with their IT specialists, as an extension of their team, we're proud to have delivered a hybrid infrastructure solution that has already made such a demonstrable impact both financially and operationally, and paves the way for the council to move forward confidently."

For more information or to discuss your requirements, speak to CDW:

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