



UK City Council Comes Back To the Future with Nutanix

BUSINESS NEED

Although often seen as an enabler of digital transformation, the public cloud doesn't represent a one size fits all solution, as Derby City Council discovered mid-way through a migration to the public cloud. Initially seen as a way of eliminating its on-premise datacentre and associated costs, the Council's reliance on a multitude of legacy applications meant having to go well over budget to meet required service levels in the public cloud. Technical issues also hindered the move and combined with rapid price escalation, made wholesale migration to the public cloud unaffordable. As a result, the Derby City team needed to both scale back on their public cloud deployment and at the same time, build a new on-premise infrastructure to repatriate workloads as part of a more conservative hybrid approach.

CHALLENGE

When the facilities management contract for the managed IT services and its datacentre came up for renewal in 2015, Derby City Council began to look for alternatives and at a time of strict financial restraint, was advised that moving workloads to the public cloud was the best way forward, based on the presumption of significant financial savings from eliminating its on-premise datacentre.

Mid-way through the subsequent migration it became clear that key legacy applications, never designed to run in the cloud, would consume more resources and incur more costs to host in a public cloud environment than anticipated. Moreover, technical issues meant that many applications would have to continue to reside in the on-premise datacentre. So, far from saving money, the new cloud-only policy was rapidly becoming unaffordable as Alistair Taylor, Project and Change Manager at Derby City Council, explains:

"Price escalation, plus the need to buy more resources than anticipated, meant that by the time we had migrated around half of our datacentre workloads the operational costs were already double what we had projected for the entire project."

At this point, the operator of its on-premise datacentre also raised prices, prompting the Derby team to take drastic action - to not only scale back on public cloud use and bring apps back in house, but do so in a relocated datacentre under new management. More than that, the Council added further to its workload by committing to replace the legacy hardware originally expected to be made redundant by the public cloud migration.

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

- Alistair Taylor, Project and Change Manager, Derby City Council

SOLUTION

It didn't take long for the Derby team to realise that the best way forward was a hyper-converged infrastructure able to deliver the same kind of scalability and pay-as-you-grow economics as the public cloud, but in a format better suited to Derby City's workload mix. Once bitten, twice shy, however, they needed to be convinced this was really the best approach which meant testing and trialling products from a number of vendors before opting, ultimately, for the Nutanix Enterprise Cloud Solution as the best fit for the Council's IT needs.

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

To that end, the initial configuration chosen was a 13-node Enterprise Cloud cluster. This proved more than sufficient to accommodate the repatriated workloads, while immediately reducing the required rack space by almost 40 per cent, with corresponding reductions in power and cooling overheads.

The Council also opted to work with CDW, a Nutanix Elite partner with considerable experience of such projects to help manage the migration. A decision that was to prove pivotal to the eventual outcome.

"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, however, is less common and more complex, requiring development of custom migration tools. Something we couldn't have done without the help of an expert partner like CDW."

CUSTOMER OUTCOME

With the help of CDW, issues with workload repatriation were quickly resolved and Derby City Council has now successfully repatriated almost all of its 400+ workloads, leaving just three in a public cloud environment. The Council has also opted to stick with the public cloud to meet its email and office productivity requirement using Office 365, which was proven to be more economical than hosting Office directly.

The relocation of the Council's on-premise datacentre to a more affordable provider has similarly been completed. And that, together with further reductions in rack space (down to just five from an initial starting point of 17 cabinets at the last count) has brought the annual running costs plummeting from £200K to less than £37.5K for data centre space – a massive saving of over 80 per cent. Furthermore, when compared to the cost of running the Public cloud -skewed infrastructure plus the old datacentre, Alistair estimates that by migrating the majority of its workloads to the Nutanix Enterprise Cloud, the Council can expect to realise a saving of around £1.7 million on total IT spend over the next five years.

NEXT STEPS

Following the extensive reorganisation of its infrastructure, Derby City Council believes it now has the capacity to handle all of its IT needs going forward and that costs are finally headed in the right direction. That, however, doesn't mean complacency, and in the short term intends to migrate all remaining workloads to the Nutanix AHV hypervisor, further lowering costs by eliminating the licencing overheads associated with VMware.

The Derby team are also keen to leverage the inherent resilience of the Enterprise Cloud architecture to provide for disaster recovery as well as data protection. At present, the Council team uses the built in snapshot tools to take backups which are stored both locally and in the public cloud. Beyond that, however, they are now looking at more advanced cloud-based replication and automated disaster recovery tools such as those provided by Xi Leap, available as part of the Enterprise Cloud software stack.

There are also long term plans to provide for network segmentation using AHV and Nutanix Flow to build a more flexible software-defined infrastructure based on Nutanix Enterprise Cloud technologies. All of which will further enable Derby City Council to reconsider the IT future promised by the public cloud, in a manner better suited to its application needs and financial limitations.

INDUSTRY

Public Sector

BENEFITS

- › Repatriation of workloads from costly public cloud environment back to a more affordable on-premise datacentre.
- › On-premise datacentre costs reduced by 75%, delivered by switching providers together with rack space economies and associated reductions in maintenance, power and cooling.
- › Full virtualisation at lower cost through migration of VMs to Nutanix AHV hypervisor.
- › Integrated management of physical and virtual resources through Prism Central management console.

SOLUTION

Nutanix Enterprise Cloud

- › Prism management plane
- › Mix of VMware and AHV hypervisors with plans, ultimately, to migrate all workloads to AHV

APPLICATIONS

- › Prism management plane
- › 400+ hosted VMs
- › Multiple specialised local government workloads (finance, housing, recycling etc.)
- › Microsoft Windows network support (Domain Controllers, Web, file and print etc.)
- › Microsoft SQL Server
- › Citrix Virtual Apps and Desktops

Nutanix makes infrastructure invisible, elevating IT to focus on the applications and services that power their business. The Nutanix enterprise cloud platform leverages web-scale engineering and consumer-grade design to natively converge compute, virtualization and storage into a resilient, software-defined solution with rich machine intelligence. The result is predictable performance, cloud-like infrastructure consumption, robust security, and seamless application mobility for a broad range of enterprise applications. Learn more at www.nutanix.com or follow us on [Twitter@nutanix](https://twitter.com/nutanix)

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T. 855.NUTANIX (855.688.2649) | F. 408.916.4039
info@nutanix.com | www.nutanix.com | [@nutanix](https://twitter.com/nutanix)