

dnata Travel Group to build distributed hybrid cloud using Nutanix

About dnata

Industry: Air travel services

Employees: 46,000

Revenue: AED 14.9 billion (US\$ 4.1 billion).

Geo: UAE/UK/Worldwide

Website: www.dnata.com

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New hybrid cloud solution to offer enhanced options for scalability and sustainability measurements for one of the world's leading travel services providers

The dnata Travel Group, a leading global travel services provider, is working with Nutanix to consolidate and restructure its approach to IT operations, enabling a highly agile and sustainable new operating model.

Following years of growth and acquisitions of leading travel industry brands, the company had a collection of now legacy, power-hungry and specialist technology stacks which meant significant IT management overheads, complexity and costs in operations and networking. Coming out of the pandemic and realising the opportunities in a return to air travel, dnata knew it needed to enable the services required for this new reality. IT would need to be nimble, agile and be the orchestrators of a whole new travel experience. The company would need to seize these rapidly emerging opportunities by delivering a step change into a totally different IT paradigm.

The globally distributed hybrid cloud topology journey began by consolidating racks of legacy compute platforms in a myriad of UK data centres into a new sovereign stack. This enabled the provisioning of a national hybrid cloud instance that now enables its people to deliver localised customer experiences and focus on future innovations.

During the pandemic and beyond, customer needs had also changed, with sustainability and environmental factors now becoming fundamental decision factors in travel. Across the dnata Travel Group's global brands, there is an increased focus on being acutely

cognisant of energy consumption, carbon footprint and sustainability metrics. This required changes in business thinking, with new innovations and sustainability-by-design to be incorporated into everything IT touches.

BUSINESS NEED

A fast, comprehensive overhaul of IT operations to create harmony from isolated applications and platforms, and to reduce greenhouse gas emissions and energy consumption. The desired business outcome: rapid innovation, future-proofed change and agility for the business at a time when post-pandemic business travel was bouncing back.

Key Results

A sustainable ecosystem

More energy-efficient operations after moving away from legacy, three-tier architecture to a more flexible, scalable platform that's adaptable to the long-term needs of the business. Energy savings from smaller physical system footprints, smaller thermal envelopes, and a reduced electricity bill.

Integrated systems

A modern, highly integrated, software-defined stack with excellent interoperability, future-proofing, operational cost savings, visibility, and automation opportunities.

Streamlined management

Reduced need for legacy engineering, simplified supply chain and control of an evergreen environment where capabilities can be life cycled, added quickly, moved, and replaced but which is affordable, scalable and on tap without risk of overprovisioning.

CHALLENGE

Established in 1959, dnata has expanded globally to offer a full range of international air and travel services. dnata Travel Group brands from leisure to corporate, provide half a billion hotel and flight searches per day.

Swelled by over a decade of growth and acquisitions, the company had acquired many legacy technology stacks across the UK. Planned investment in integration was stalled by difficult trading during the Covid pandemic. This led to increasing IT management overheads, supply chain inefficiencies and significant complexity in networking and operations, resulting in high costs and inefficiencies. Coming out of the pandemic and seeing the opportunity of a return to flight travel, the dnata Travel Group urgently needed to review its IT operations, which now required a wide range of specialist skills to maintain.

The company had been impacted by the reduction in air travel caused by Covid lockdowns and, with the pandemic under control and demand for air travel rapidly returning, the Travel division of the business was under pressure to move quickly. This would mean integrating the load from dozens of diverse technology stacks, rationalising it all into a single stack in a new hyperconnected Software-Defined Data Centre (SDDC). In doing so it reduced operating costs but also significantly improved energy efficiency helping to address sustainability goals as well as improve performance. With the travel sector beset by many imponderables such as scaling, spikes in demand and how best to meet country and regional data sovereignty needs, dnata needed agility and adaptivity for the future.

The previous focus on three-tier architecture and legacy systems had restricted its ability to process data, collaborate, and mine information to inform strategic decision-making. It also meant more complexities in leaping on opportunities, creativity, and the provision of internal shared services. To succeed, dnata needed to move both physical and virtual servers to the new environment, alongside ancillary equipment such as network switches, storage arrays, storage networking, NAS devices and other hardware being virtualised onto the new platform.

dnata was also deeply aware of the need to monitor sustainability credentials. Finally, vendor management required rationalisation to a more elegant, integrated and energy-efficient design.

SOLUTION

dnata decided to turn to Nutanix and its Cloud Platform software stack. The Nutanix Cloud Platform provides storage, database services and desktop as a service under private and public cloud environments, with infrastructure and management controls. dnata also decided to consolidate to a single Nutanix AHV as its default virtualisation hypervisor and has formulated a three-year plan to migrate the load from all its stacks, one by one, at a cadence of every few months.

Nutanix is working in lockstep with dnata, helping it with not only technical issues but also coaching, training and other 'soft' skills, such as helping the IT department to build a business case with return-on-investment calculations and evidence of sustainability improvements. dnata worked with Nutanix to set up the dnata private cloud with scope for internal segmentation, multi-tenancy and FinOps so the operating environments could be provisioned as a group community cloud with common processes, security, and governance regime.

OUTCOMES

dnata has made huge improvements to the efficiency and integration of its IT systems and is continuing to work towards its stated aim of rationalisation. Application performance has risen and with accurate requirement gathering and solution sizing coupled with flexible, heterogeneous scaling, the need for wasteful overprovisioning has been almost eliminated.

In terms of practical outcomes, results have been remarkable. With the migrations to date, we have achieved a 75 per cent reduction in rack space and a reduction of 54 per cent in power demand, translating so far to an estimated 18,739kg saving in carbon dioxide emissions per year (enough to charge over 2 million phones). Now that we have the initial clusters operational, we will then migrate the enduring loads from our remaining large tech stacks, thus delivering even better figures.

NEXT STEPS

As we travel along our transformation path, we have still much to achieve. The completion of the initial phases of this UK-based project has provided us with a reference architecture that we can now replicate across the globe, localising the solution to fit unique national requirements and their sovereign data requirements, creating the distributed hybrid-cloud needed. The migration from an underlying point-to-point WAN to a SD-WAN overlay and boundary cloud-delivered security provides the glue of this globally distributed hybrid cloud topology that will support the dnata Travel Group's global growth. The performance of these platforms means the business can meet those targets without compromising future performance, flexibility, or sustainability.

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