IONOS

Telecom2 migrates to the cloud to increase output

The IONOS Cloud enabled the telecommunications provider to be more flexible with their resources, making it possible to reallocate resources between the UK and Spain as required.

"From the planning to the migration to IONOS Private Cloud, the process was made easy by the IONOS team. Telecom2 decommissioned equipment in 2 separate data centres, this allowed us to cut contact centre provisioning time dramatically, whilst reducing our infrastructure costs by over 50%. Telecom2 manages millions of phone numbers on behalf of companies, charities, and public sector organisations."

Rob Johnson Chairman of Telecom2

TELECOM2

Telecom2 is an all-in-one, business to business telecommunications provider with an extensive portfolio of technology, products and services across the voice and mobile sectors. An on-going commitment to investment in new technologies ensures these products will meet your needs now, and in the future.

As a network operator, licensed and regulated by Ofcom and redundant over multiple sites, Telecom2 offers secure and stable solutions to all your telecommunication needs.

Rob Johnson continued: *"These clients expect their numbers to be available 24/7 and 365 days a year. Telecom2 needs to be able to scale resources fast. After years of managing its own infrastructure, Telecom2 moved to IONOS Private Cloud. The migration involved the closing of Cage and Rack space and the removal of servers and switches; this also was facilitated by a switch to BT IPEX away from TDM based Telecoms. The new infrastructure brings more flexibility, including the ability to reallocate resources between the UK and Spain as required."*

The advantages

- Choosing a cloud provider that supports VMware enabled Telecom2 to lift and shift its servers without any need to re-engineer them.

- IONOS helps Telecom2 to meet its regulatory obligations under PCI DSS and GDPR, by providing compliant environments.

- Telecom2 is now in a position to scale up rapidly to meet customers' fluctuating call demand – it can now provision a new contact centre in weeks instead of months.

The challenges

When you pick up the phone to donate to a charity and to talk to an agent, you might be calling a number that's hosted by Telecom2. The company manages about 12 million numbers and works with most UK carriers. The company also provides technology to call centres, including its Apex PBX voice-over-IP (VoIP) solution.

"We provide the call centre with the environment required to receive an inbound call for an agent, answer it, log it, interact with the customer relationship management (CRM) system, and transfer the call or organise a call back," said Alex Perez, founder and managing director, Telecom2.

The company had built its own infrastructure, operating its servers in-house and using VMware to run virtual machines on them. In total, there were more than 20 racks across multiple data centres, with many suppliers and operators involved. "There's a huge cost associated with the personnel required when you have your own bare metal equipment," said Pantelis Maisoglou, director of telecom product engineering, Telecom2. "You need to hire specialist skills. For example: people who know about storage and people who know about setting up VMware."

Telecom2 needed to be able to scale resources rapidly to satisfy client expectations. "One of our customers is a classified advertiser," said Perez. "When a particular item becomes the latest craze, they have to double or triple the number of agents they've got receiving orders for those phone lines. If we cannot adapt our infrastructure to meet that demand, we lose a client, and they go elsewhere. It's as simple as that."

With clients including hospitals, schools, police stations and major humanitarian organisations, Telecom2 needed a resilient environment with robust disaster recovery measures. Since the software is used for processing credit card payments, for example for pay-per-view TV bookings, Telecom2 needed a solution that complied with PCI DSS (Payment Card Industry Data Security Standard).

Telecom2 began its experiments with virtualisation using the VMware ESXi hypervisor in 2013. In 2015, the company got its first V3 cluster, and later added a second one. "When the first cluster reached the end of its warranty, we had to decide whether to invest in capital expenditure and get a new cluster or whether we go for an operational expenditure solution, such as a private cloud offered by IONOS".

The solution

Switching to the IONOS Private Cloud

Telecom2 chose to migrate all its infrastructure to IONOS Private Cloud, which provides flexible billing based on usage and capacity utilisation, and the highest level of data security. "By moving to the IONOS Private Cloud solution, we didn't need people with deep knowledge about VMware, or people who needed to be available 24/7 to attend to an incident in the data centre," said Maisoglou. "Now, all this is provided by IONOS."

Whereas Telecom2 previously had to manage relationships with fibre providers, now IONOS takes care of connectivity. "We don't have to worry about where the bandwidth is coming from, who's supplying it, and what bandwidth we have got," said Perez. "It can be increased or decreased at the click of a button."

Telecom2 uses data centres in the UK and Spain to place workloads close to customers and provide redundancy in case of a failure at either site. "Some highly critical services run in London most of the time," said Maisoglou. "If a catastrophe happens, we can relaunch everything on the Spanish side. In the future, we could add a third or fourth location, too."

Telecom2 can also flexibly reallocate virtual machines across the sites as required, in line with customer demand. "The communication between the two sites is so good that it's easy for us to move machines from one side to the other," said Perez. "It takes minutes."

Hosting in the two locations makes it easier for Telecom2 to comply with the General Data Protection Regulation (GDPR) requirements in each country.

The private cloud solution provides the rapid scalability Telecom2 requires. When the Covid-19 pandemic struck, Telecom2 was able to rapidly scale up the number of extensions the NHS had available to handle NHS 111, and track and trace calls. To increase the number of seats the NHS has available in the Apex PBX software, Telecom2 simply increases the processor resources available or adds more machines to the cluster. "Traditional telephony providers were not as flexible as we were," said Perez. While competitors were quoting six-month schedules, Telecom2 was able to increase capacity within six weeks.

IONOS provides expert support. Francisco Galan, head of system and network, Telecom2 said: "We didn't need any help during the migration to IONOS. We had a couple of hours of training. The relationship with IONOS including the commercial team, the support team, and the network team in Spain, is going really well. Everything is positive about the support team with IONOS."

Maisoglou added: "One thing that we really like with IONOS support is the level of technical competency it has. When you are running a product like a private cloud solution, you cannot be dealing with first level support in an outsourced call centre, that tells you to turn it off and on again. You need competent engineers on the other side. We've been in the industry for more than a decade, so we know our stuff. It is refreshing to deal with the IONOS team who also know their stuff."

IONOS works closely with Telecom2 to resolve a problem if one arises. Perez said: "Unlike other providers we have worked with, IONOS have raised their hands and admitted when there is a problem. Then they work to identify the reason and figure out a solution. Although it should be the norm, that's not something we're used to."

Because Telecom2 can see the percentage of each cluster that it is using, the company can more easily plan capacity.

The implementation

Lift-and-shift migration

One of the advantages of IONOS Private Cloud is that it is based on VMware, so Telecom2 was able to easily migrate its existing servers to the cloud.

"If we had chosen a hyperscale cloud provider, we would need to re-engineer our applications to fit the components provided by the public cloud providers," said Maisoglou. "With IONOS Private Cloud, it was a lift-and-shift operation. We didn't have to spend any time re-engineering the applications. We just had to plan, schedule and execute, moving everything from our own data centres to IONOS. This was a great benefit because it takes months or if not years to re-engineer an application for AWS or Google Cloud."

He added: "We have around 300 virtual machines, and each project contains multiple VMs. Re-engineering all that for AWS or Google Cloud would probably lock us in for a good two or three years."

Telecom2 was also able to easily migrate a lot of bare metal servers that were running legacy software, using multiple versions of Linux. These servers would have been difficult to recreate from scratch. "We literally took a bare metal server, zipped it up, and put it on the IONOS Cloud," said Maisoglou.

Conclusion

Greater flexibility at a lower cost

By working with IONOS, Telecom2 has achieved the flexibility that its customers require. One of its customers is a major pay TV operator. "Within two hours of the event taking place, you receive hundreds of thousands of calls that need to be managed and distributed," said Perez. "The flexibility that IONOS gives us plays an important role in meeting this demand. The payment processing requires security, which IONOS gives us with a PCI DSS compliant solution."

For another customer, Telecom2 doubled the number of transactions from 200,000 per minute to 400,000 per minute using the IONOS infrastructure.

Whereas setting up a 100-seat call centre would previously take up to four months, working with IONOS, Telecom2 has cut this to a few weeks. "We don't have to go through the whole process of procuring a physical server, waiting for it to be shipped from abroad, and installing it in the data centre," said Maisoglou.

At the same time, Telecom2 estimates it has reduced its infrastructure costs by 60%, equivalent to £420 million per year.

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