

Major Telecom Provider Uses Virtualization to Give Customers Greater Flexibility and Lower Costs in Outsourced Datacenters



KEY HIGHLIGHTS

INDUSTRY: **TELECOMMUNICATIONS**

GEOGRAPHIES

Headquartered in London, United Kingdom; employees in 53 countries, providing services in 173 countries.

SOLUTION OVERVIEW

- Built an application that automates the process of provisioning datacenter services for the services company's clients
- Eliminated human error from the provisioning process while giving clients greater levels of autonomy
- Enabled the services company to deliver data-center services at a lower cost
- Eliminated the need for the lengthy training and complex documentation normally associated with complex development projects
- Created a scalable platform for meeting the IT outsourcing needs of a wide variety of clients

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Principal Solutions Architect

Project Summary

The worldwide managed services and solutions company of a major telecom helps multi-site organizations master the complexity of business communication, serving corporate and government clients worldwide and wholesale clients outside the UK. The services company employs 37,000 people serving 173 countries. It provides a range of specialist network-centric propositions and practices that encompass high-performance networking, applications management, outsourcing and managed services, and business transformation.

When the services company decided to use virtualization technology to automate provisioning of its datacenter services, it turned to VMware Professional Services. VMware consultants enabled the company to deliver services through a cloud computing model. They provided detailed specifications for the project and proactively led the development process. They also contributed expert advice on the specific VMware technologies that would make development as easy and cost-effective as possible for the services company's team. The final product was an application that lets clients tailor their datacenter solutions with one click.

Automating Datacenter Provisioning Through Virtualization

Over the past 10 years, a leading telecom has ventured beyond its roots to become a global leader in information and communications technology (ICT) and network provisioning. The telecom's services company is at the heart of this relatively new venture, building and hosting datacenters for a wide range of large enterprises.

The services company was one of the first VMware clients and supports much of its work with virtualization technology. The company initiated the relationship by using VMware solutions to virtualize about 10,000 of its servers. Later, the company began applying the same technology in its hosted datacenter solutions, offering clients the superior service levels they had become accustomed to while dramatically reducing costs.

However, the services company was still using a manual, labor-intensive process to provision datacenter solutions for its clients – a process that required staff to perform such tasks as racking and configuring servers. Seeking to increase its responsiveness to client needs, the company developed a unique concept: the virtual datacenter (VDC). In the VDC, the network, storage and actual virtualization layer are all delivered through a self-service portal, allowing clients to provision their own datacenters online.

"We thought that by automating our provisioning process, we could eliminate the chance for human error while giving the customer complete control at the click of a button," says the Principal Solutions Architect at the services company. "Because of our long and successful relationship with VMware, we envisioned that their technology would be the backbone of our initiative."

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Seasoned VMware Consultants Spearhead Product Development

The services company soon realized that building the VDC would require a major investment of time and resources. Hoping instead to quickly build a more automated version of its existing datacenter provisioning service, the company turned to VMware for advice. The VMware account team shared some good news: a VMware orchestration platform – the same technology that powers VMware vCenter Lifecycle Manager – would enable the company to build simple tasks or workflows and then link them to create larger applications.

The result would be a fully automated application that would allow clients to provision a virtual datacenter via VMware Infrastructure. This application would leverage the cloud computing concept to make the services company's IT resources as accessible and ubiquitous as possible.

VALUE OF VMWARE SERVICES

- Seasoned consultants determined project goals, created custom specifications and guided progress through milestones
- Consultants over-delivered the predetermined number of code modules, giving the in-house development team a solid basis for development
- Project resulted in a product offering that has been recognized by Gartner and IDC for its uniqueness

ACTIVITIES AND TOPICS

- Automated provisioning and management of virtual machines, network and storage
- Self-service portal
- VMware vCenter Orchestrator driven
- VMware vCenter Integrated
- Self-healing and automatically load-balancing datacenter
- Virtual machine creation and control
- Virtual machine migration

DELIVERABLES

- VMware Professional Services Feasibility Study
- Functional and technical specifications
- Solution design validation
- Custom code development – vCenter Orchestrator workflows to automate the datacenter
- User documentation to enable the services company to programmatically initiate tasks
- Best practices and knowledge transfer

Because the services company wanted to automate VMware products, it turned to VMware Professional Services for help. The company launched its project in May 2008 and looked to VMware consultants to guide the way.

“To us, it made sense to work with the people who understand VMware products best – and that’s VMware Professional Services,” says the Principal Solutions Architect. “As soon as we brought them on board, they validated our proof of concept so that we could move right into the planning stage. Our VMware consultants really took the lead, acting as a partner rather than just a supplier. They were proactive about setting a direction that used the cloud computing model to help us get the most out of our virtualized environment.”

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Principal Solutions Architect

Detailed Specifications Guide Project to a Successful Finish

VMware Professional Services assessed the services company’s requirements and then developed a detailed specification to meet those needs while addressing the business implications of shared computing resources. To form the basis of its new application, the company purchased modules of custom code from VMware. Each module served a specific purpose, allowing the company to automate the provision of an end-to-end service, such as adding or deleting a server.

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It took just six weeks for the project team to deliver approximately 15 workflows based on the product specifications. By carefully determining the company’s goals up front, the VMware consultants helped ensure a rapid, successful completion to the project. Since implementing the automated provisioning application, the company has not requested a single change to the code.

“VMware Professional Services came to the project with a unique knowledge of VMware virtualization technology and the orchestration platform,” says the Principal Solutions Architect. “Their expertise made our new application possible, and accelerated our move to the cloud computing model.”

As an added benefit, the services company’s developers avoided the steep learning curve often associated with complex development projects because the VMware orchestration platform uses only industry-standard protocols and mechanisms. After building the web interface for the company’s provisioning application, the company’s developers simply wrote standards-compliant web service code that made calls to the orchestration platform on the back end. There was no need for the developers to undergo training or consult detailed documentation before connecting the interface to the platform.”

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Automated Application Gives Clients Greater Control at a Lower Cost

In a challenging global economy, many of the service company’s clients – typically large companies with complex IT environments – are eager to reduce costs. The new datacenter provisioning application enables them to select services in a cost-effective, scalable manner – outsourcing IT while also maintaining control of the IT landscape. The Principal Solutions Architect summarizes the benefits of the application according to “the three A’s.”

“Our provisioning application delivers automation, autonomies and autonomy to our clients,” he explains. “Automation removes the human element to dramatically reduce errors. Autonomics means that our platform is self-healing, so that any time a server goes down, a new one automatically takes its place. And our clients now have autonomy because they can make decisions about IT services right on their desktop.”

One client that has reaped the benefits of the new VDC solution is a UK-based company that lets customers create online customer response forms. Until recently, the client wrestled with an expansive – and increasingly expensive – IT infrastructure. The company considered several ways to reduce costs before deciding to migrate to an outsourced datacenter provided by the services company.

The client's hosted datacenter consolidates 15 separate servers onto a single virtual platform, giving the company full control of its IT infrastructure for the first time ever. Within 12 months, the client achieved a full return on its investment. The company has saved 60 percent on its hosting costs and eliminated its six-figure bills for staffing and IT consultancy.

"The decision to adopt a virtual model was crucial to our survival as our development costs were spiraling," says the IT Director at the client company. "The services company was able to rightsize its offering for us, and provided a written guarantee that the new virtual system would work better than the old physical one, underpinned by specific service level agreements."

The services company also provided the client with two paths of scalability that will help the company adapt swiftly to changing business conditions: horizontal scalability, in which more servers can be brought online; and vertical scalability, whereby more processors are added. Although the client completely eliminated its physical servers, its migration to a virtual datacenter did not cause a single minute of downtime.

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Partnership Fuels Continuous Innovation

Although the services company's automated provisioning solution has already gained recognition from analysts such as Gartner and IDC, enhancements will continue. The company plans to keep working with VMware Professional Services in the hopes of offering clients push-button control over networking and storage. Thanks to the cloud computing model made possible by VMware, the company looks forward to deploying this additional service without having to worry about the impact on the underlying servers, storage and network resources.

The enthusiastic response from its client base has convinced the service company to continue striving for greater automation in its solutions. The company also took heart when in late 2008, VMware released a roadmap that demonstrated a commitment to automation, with the goals of increasing autonomy and reducing complexity for clients.

"We and VMware may be two different types of companies, but our strategies are very closely aligned," says the Principal Solutions Architect. "VMware is absolutely pivotal in our business because we are virtualizing everything and they are the number-one player in that market. By collaborating with VMware to build our virtual infrastructure correctly from the start, we anticipate greater efficiency and control, as well as more flexibility in how we deliver IT resources. Working with VMware Professional Services has definitely been one of the most rewarding projects I've completed in my 23 years in IT."

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