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ENVIRONMENT COMPANY

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CASE STUDY

SERVICE PROVIDER CAN PREDICT COSTS TO THE PENNY

Cobweb Solutions used Vblock™ Infrastructure Platforms to build flexible hosting platform for applications as a service.

Challenge

Founded in 1996, Cobweb Solutions Ltd. provides hosted IT services to more than 6000 European customers, ranging from two-person businesses to large enterprises. The company differentiates itself by aggregating best-of-breed communications applications, including Microsoft Exchange and SharePoint, and offering service-level agreements (SLAs), for performance and availability.

Cobweb maintains its data center in one of London's top hosting facilities and regards its data center technology as a competitive advantage. For example, the company was one of the first service providers to offer multitenant hosting and to virtualize production applications. In addition, as one of Europe's only ISO-accredited hosted services providers, Cobweb attracts customers because of its commitment to data security.

When the data center infrastructure needed a refresh, Cobweb decided to build a hosting platform with a longer life than the three years typical for leading service providers. "To attract and retain customers, we needed an architecture that would enable us to quickly bring new services to market and offer leading SLAs," says Julian Dyer, chief technology officer for Cobweb. "And to keep costs down, we need the ability to expand in small building blocks, with predictable costs."

In addition to modular expansion, technical requirements for the new infrastructure included predictable performance for compute and storage, simple management, a compact footprint, and 10-Gbps connectivity to support continued business growth.

"To meet these goals, we realized we needed a unified architecture from vendors that worked in harmony rather than selling individual pieces of an overall solution," Dyer says.

Solution

Cobweb engaged MTI, a member of the Vblock Partner Ecosystem, to recommend and implement an advanced data center infrastructure to meet the business and technical goals. MTI recommended preintegrated Vblock Infrastructure Platforms from VCE, the Virtual Computing Environment Company formed by Cisco and EMC, with investments from VMware and Intel.

"What appealed to us most about Vblock Infrastructure Platforms is the ability to add capacity in modular pieces, on demand," says Dyer. "In addition, the capital expense of Vblock is similar to other architectures, operating costs are far lower, and Vblock is far more flexible." Cobweb also liked the fact that industry leaders were behind VCE. "VCE provides compelling advantages for support and warranty compared to fragmented

Executive Summary

Challenge:

- Quickly introduce new hosted services
- Support rapid business growth
- Minimize capital and operational costs

Solution:

- Vblock 1 system from VCE, including Cisco MDS 9148 Multilayer Fabric Switch for SAN connectivity

Results:

- Implemented infrastructure in five days
- Hosted 10,000+ seats of Microsoft Exchange, with room to grow
- Made resource costs predictable to the penny

buying,” Dyer says.

Cobweb’s Vblock 1 solution includes the Cisco Unified Computing System, Cisco Nexus 1000V software switch, three EMC CLARiiON CX4 storage arrays, and the VMware vSphere platform. To host more than 50,000 seats of Microsoft Exchange on Vblock 1 with the lowest cost, Cobweb needed three SANs. Therefore, MTI recommended using the Cisco MDS Multilayer Fabric Switch 9148 as part of the Vblock 1 architecture. Cobweb has enabled 16 of the 48 line-rate 8-Gbps ports, paying only for those ports.

The Vblock 1 system currently contains 16 server blades that host about 200 Microsoft servers. Cobweb configured the servers with 64 GB of memory to optimize Microsoft Exchange performance, and will later upgrade to 128 GB to support more virtual machines. “When we finish testing Microsoft Exchange 2010, we expect to use no more than eight physical servers to host 50,000 seats, and the architecture can scale to support up to 300,000 seats,” Dyer says.

Cobweb takes advantage of the Vblock 1 platform’s flexibility to host physical as well as virtual servers. The goal is to be completely virtual, but the company determined it would be simpler to host Microsoft Exchange 2007 as physical servers for the short time until it completed testing of Microsoft Exchange 2010.

Results

Competitive Advantage

Cobweb’s software-as-a-service business is growing rapidly, and Vblock 1 makes it easy to scale to meet demand. “Customers use our service so that they don’t have to worry about the underlying infrastructure or the costs of change, as they add more users or more communications applications,” Dyer says. “The modular design of the Vblock 1 infrastructure lets us grow without fear that we’ll run out of resources.”

Predictable performance from the preintegrated architecture also helps Cobweb plan ahead. “We know the performance we can expect from Vblock 1 compute and storage resources, so we can calculate cost models and resource requirements to the penny,” says Dyer. “Predictable costs give us a competitive advantage.”

Lower Capital Expense

Not only is Cobweb offering customers an industry-leading platform, it can do so at competitive rates because the Vblock 1 system’s high memory capacity supports more seats on each server. “We can host 10,000 to 15,000 Exchange mailboxes using just a part of the Vblock 1 system’s capacity,” says Dyer. “In fact, we expect the Vblock 1 to pay for itself through more efficient and flexible hosting of cloud services.” Return on investment will increase as Cobweb introduces new services.

Low Operational Expense

Ease of management also helps Cobweb offer competitive pricing. MTI, the partner, trained Cobweb engineers to manage the Vblock 1 platform and the Cisco Nexus 7000 Switches used at the core. “We were able to complete the build out in just five days because the Vblock 1 system is preintegrated and MTI is an experienced partner,” Dyer says.

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Next Steps

Cobweb expects to add 16 more blade servers to the Vblock 1 system to support new customers and new services, including unified communications. Expansion will not require the time and costs of cabling because of the wire-once architecture. All existing and future servers connect to EMC storage and the Cisco Nexus 7000 Switch through a single pair of Cisco UCS 6100 Series Fabric Interconnects.

The company is also using the Vblock 1 system as the foundation for new services. One plan is offering a private cloud for messaging services, which customers have started to request. Another is offering VMware vCloud Datacenter Services on the Vblock 1 system so that customers can quickly set up customized virtual data centers. A local government, for example, could begin using a SharePoint portal just a few days after requesting it. The company is also considering offering a disaster recovery service on Vblock Infrastructure Platforms in another data center, using VMware tools such as VMware Site Recovery Manager.

One of the most innovative plans is to organize a federation of service providers who can use each other's Vblock resources at wholesale rates. "The idea is that service providers with spare compute or storage capacity will make it available to other service providers in the federation for days, weeks, or months," says Dyer. "This arrangement will allow us to cost-justify expanding our Vblock 1 platform in advance of when our customers need it."

Dyer concludes, "Working with the VCE, alongside Cisco, EMC, and VMware supports our strategic plan to align with industry leaders. We view VCE offerings as somewhat disruptive, giving us a competitive advantage over service providers that use fragmented architectures."

For More Information

- For more information about the VCE coalition, please go to www.VCE.com.
- For more information about Cobweb Solutions, please go to www.cobwebcloud.com.

Products and Services

- Vblock 1
- Cisco Unified Computing System
- Cisco Nexus 1000V software switch
- Cisco MDS Multilayer Director Switch 9148
- EMC CLARiiON storage with RSA security
- VMware vSphere
- Cisco Nexus 7000 Switch
- Planning, design, implementation and support services from MTI, a Vblock Partner Ecosystem member

ABOUT VCE

VCE, the Virtual Computing Environment Company formed by Cisco and EMC with investments from VMware and Intel, accelerates the adoption of converged infrastructure and cloud-based computing models that dramatically reduce the cost of IT while improving time to market for our customers. VCE, through the Vblock platform, delivers the industry's first completely integrated IT offering with end-to-end vendor accountability. VCE's prepackaged solutions are available through an extensive partner network, and cover horizontal applications, vertical industry offerings, and application development environments, allowing customers to focus on business innovation instead of integrating, validating and managing IT infrastructure.

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