Building a Scalable Platform for Local Government

Hammersmith and Fulham council improves productivity with highly resilient desktop-as-a-service

EXECUTIVE SUMMARY

Customer Name: London Borough of Hammersmith and Fulham council

Industry: Public Sector

Location: United Kingdom

Number of Employees: 3200

Challenge
- Do more with fewer resources, while protecting frontline services
- Improve collaborative working with greater use of shared services, flexible working, and technologies such as bring-your-own-device
- Rationalize property portfolio through acceleration of mobile and home working

Solution
- Cisco Desktop Virtualization Solutions, running on Cisco Unified Computing System (UCS) with Intel Xeon processors

Results
- Cost per VDI seat reduced by 20 to 25 percent
- Power consumption down by 80 percent
- Total cost of ownership cut by one-third

Challenge

Like all local authorities, the London Borough of Hammersmith and Fulham (H&F) council faces continual headcount and budget challenges. Despite these challenges the council remains committed to protecting frontline services and avoiding increases to council tax year-on-year, and has placed even greater emphasis on finding new ways to save money. These include an innovative shared services scheme with neighboring councils, Westminster and the Royal Borough of Kensington and Chelsea, aiming for a £40 million saving across the three organizations by 2015.

The council's objectives include making better use of cloud technology for scalability and security. This forward-looking approach, combined with the early adoption of new technologies, can be traced back to over 10 years ago when H&F first pioneered desktop virtualization. A forerunner to what has today become known as virtual desktop infrastructure (VDI), the system served the council well but was limited in the number of users and services that it could support and by its performance. Large spreadsheets, for example, would take a long time to open.

In addition to these system limitations, H&F needed to respond to a new set of challenges. Reducing cost was a major factor, along with the ability to deliver information anywhere and on any device. Increasingly, with the consumerization of IT, this meant providing a secure bring-your-own-device environment. It was also becoming harder to support system upgrades, such as Microsoft Office and Exchange, due to infrastructure reaching end-of-life.

At the same time, H&F wanted to rationalize its property portfolio by enabling greater opportunity for desk sharing, coupled with a shift to mobile and home working. Another issue involved guarding against data loss, for example, from misplaced laptops or information stored on local PCs. The emergence of desktop-as-a-service presented the council with the opportunity to strengthen business continuity by moving from its on-premise VDI solution to one where data was safely and securely stored in the cloud.

> "Training takes just 10 minutes and that's more about the Microsoft upgrade, rather than the use of the technology."

Howell Huws
Head of Business Technology
Hammersmith & Fulham council

To deliver transformational change, the council worked with its service provider, H&F Bridge Partnership (HFBP), to devise a cloud strategy to help accelerate shared services and flexible working practices, while also helping enable a smooth transition from Windows XP to Windows 7.

Solution

After scoping initial technical requirement, HFBP recommended a solution based on the Cisco® Desktop Virtualization Solutions. That evaluation was based on several factors, including the platform's ability to virtualize and package around 300 applications, something that the legacy solution could not do.

At the core of the VDI solution is a VCE Vblock 300 System, an integrated, ready-to-install architecture comprising Cisco computing and network devices, VMware virtualization software, and EMC storage technologies. The platform runs Cisco Unified Computing System™ (UCS®) Blade Servers with Intel® Xeon® processors, built to handle the most complex application sets.

The solution also included the Atlantis Computing ILIO Diskless VDI, allowing the council to reduce its dependency on back-end shared storage, and instead tap into the Cisco UCS server memory footprint. This approach delivers expansive storage I/O capacity for increased performance at reduced cost with improved hosting density of virtual desktops per server. Atlantis Computing ILIO is part of the validated reference architecture for Cisco Desktop Virtualization Solutions.

Hosted across two data centers, in an active/active configuration for seamless data recovery, the VDI platform complies with strict Government data security requirements and is also cost effective and easy to manage. There are discrete domains for data with differing levels of mandatory protection, covering Impact Level 2 (IL2) and IL3 respectively. It also needed to provide an integrated architecture, not just to deliver desktop-as-a-service, but also future collaborative applications, such as voice and video, all within a unified workspace.

"Cisco Desktop Virtualization the management of virtual desktops significantly," says project manager Adam Evans, responsible for delivering the end-to-end project for the council. Cloud networking is fully optimized by a high-speed 10Gbps low-latency LAN comprising Cisco Nexus® 5000 and 1000V Series Switches. First-line defenses have been further strengthened by Cisco ASA and Application Control Engine firewalls, which allow encrypted WAN links to be provided back to the main council office to secure sensitive citizen data. Replacing the aging council PC estate, and completing the end-to-end Cisco architecture, is the Cisco 6215 Client.

Results

The new Cisco platform has been an instant hit. Currently deployed to 1300 employees, that figure will shortly rise to 2700, which is around 85 percent of total H&F users. With the shared services project, around one-third of employees operate across borough boundaries and spend up to two days a week working at offices run by the other councils.

"It's a pull rather than push effect," says Howell Huws, head of business technology at H&F. "Early adopters like the new service because booting up, logging in and launching applications is much faster. Hearing this from colleagues rather than IT makes others ask if they can have it too. People want it as quickly as we can get it out to them."
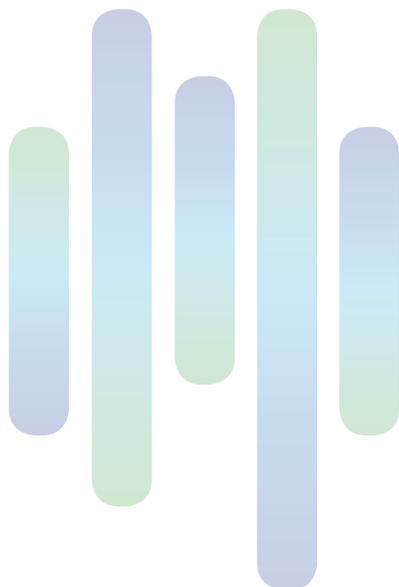
"Early adopters like the new service because booting up, logging in and launching applications is much faster. Hearing this from colleagues rather than IT makes others ask if they can have it too. People want it as quickly as we can get it out to them."

Howell Huws
Head of Business Technology
Hammersmith & Fulham council

Already the business results make impressive reading. Moving to virtual desktop-as-a-service has replaced a burdensome capital expenditure model with one that is funded from operating expense, highly scalable, and consumption-based.

The cost per seat is between 20 and 25 percent lower than before. Compared to the previous solution, Cisco thin clients consume 80 percent less electricity and have twice the expected lifespan (from five to ten years typically). These two factors alone have cut total cost of ownership by a third. Laptops have reduced in number and can be pooled, reducing capital expenditure further still. As configured, the platform has the capacity to extend to 10,000 seats in the future, especially important in view of the shared services agreement.

It's also good news for the council's service provider. Productivity has increased by 50 percent; previously one engineer could support 250 users; compared to 500 now. Service delivery is also faster and more cost effective.

The most striking example of the potential of Cisco Desktop Virtualization to transform the council's business operations is the acceleration of mobility from 50 to 85 percent of the workforce, and still growing fast.

"Training takes just 10 minutes and that's more about the Microsoft upgrade, rather than the use of the technology," says Huws. With no intensive user training required, take-up was further boosted by offering a version for home workers. Feature-rich virtual voice services, not possible with the old system, are also now freely accessible. Meanwhile, the council is looking to tap into trends such as the growth in bring-your-own-device, allowing employees to access corporate resources securely on personal devices such as smartphones and tablets.

"The potential in terms of accommodation savings is massive," says Huws. "We're well on track with our building disposal plans. More importantly, people will be able to work more efficiently, remotely or closer to the customer."

And the council faces less risk of data loss. Information that resided on PCs and laptops has now moved to the data center. Other potential uses for Cisco Desktop Virtualization include a ready-made platform for delivering eLearning and corporate communications, using a broader range of communications tools than ever before.

For More Information

To learn more about the Cisco desktop virtualization and solutions featured in this case study, please go to:
www.cisco.com/go/vdi

Product List

Desktop Virtualization
- Cisco UCS B-Series Blade Servers with Intel Xeon 500 processors
- VMware View, ThinApp, and vSphere Hypervisor

VDI Client
- Cisco 6125 Client

Routing and Switching
- Cisco Nexus 5000 Series Switches
- Cisco Nexus 1000V Series Switches

Security
- Cisco ACE Application Control Engine
- Cisco ASA 5500 Series Adaptive Security Appliance

Storage
- EMC VNX5700 storage
- Atlantis Computing ILIO

Applications
- Microsoft Windows 7
- Microsoft Office 2010
- Microsoft SharePoint

·I·I·I·I· CISCO™