Postal Agency Reduces Costs by 20 Percent with Automated Deployments and Private Cloud

Overview

Country or Region: United Kingdom
Industry: Government—Postal agencies

Customer Profile
Royal Mail Group is responsible for universal mail collection and delivery in the United Kingdom. It delivers more than 62 million items to 28.8 million addresses every working day.

Business Situation
The organization was preparing to upgrade to the Windows 7 operating system and hoped to transform its manual data backup process and time-consuming software deployments into more efficient processes.

Solution
Working with Microsoft Partner Network member CSC, Royal Mail Group implemented Microsoft System Center 2012 system management products, built a cloud storage solution, and expanded its use of Hyper-V.

Benefits
- Reduces costs
- Increases IT efficiency
- Enhances IT security
- Improves user experience

> "We expect that, by using Configuration Manager combined with our private cloud storage solution, we will be able to save 15 to 20 percent annually in desktop support costs alone."
>
> Karl Snowden, Infrastructure Manager, Desktop and Networks, Royal Mail Group

Royal Mail Group wanted to upgrade its 27,000 computers to the Windows 7 operating system. However, the cost-conscious organization wanted a way to streamline and automate the mostly manual, time-consuming, and disruptive deployment process. Royal Mail Group worked with CSC, a member of the Microsoft Partner Network, and implemented the Microsoft System Center 2012 family of products to automate system management tasks, including software updates, system monitoring, and virtual machine provisioning. In addition, Royal Mail Group implemented a private cloud storage solution for data backup, which is built on Windows Server 2008 R2 with Hyper-V. As a result, Royal Mail Group expects to reduce desktop support costs by 20 percent while increasing IT efficiency, enhance IT security, and improve the user experience.

Situation

Royal Mail Group delivers postal services to every household in the United Kingdom—more than 28.8 million addresses—through a network of 12,000 post offices, 2,000 processing sites, and 160,000 employees. Although Royal Mail Group is government-owned, the organization expects to become a private company under the current parliament.

Royal Mail Group has always been cost-conscious, facilitating some of the lowest postal rates in the United Kingdom; however, it wanted to be even more diligent about IT costs as it prepared to privatize the organization. Specifically, Royal Mail Group wanted to reduce software licensing costs, IT resource costs, and costs associated with technology impacts to its employees.

To reduce costs and limit its dependency on physical hardware, Royal Mail Group implemented VMware to run several of its business-critical applications, such as SAP software. In 2010, after the release of the Windows Server 2008 R2 Datacenter operating system with Hyper-V technology, Royal Mail Group also implemented the Microsoft virtualization platform. With more than 600 servers in the data center and three servers each at 116 remote sites, the organization knew that a more aggressive approach to virtualization could further increase its cost savings.

Royal Mail Group identified additional opportunities to manage its server and desktop systems more efficiently—including its decision to upgrade to the Windows 7 Enterprise operating system. The organization has 27,000 desktop and laptop computers spread across disparate sites throughout the United Kingdom, including on remote islands. Although Royal Mail Group used Microsoft Systems

Management Server 2003, many deployments still required an on-site engineer, especially in the case of system rebuilds. "We had some level of automation, but there have been so many improvements in system management technology since we implemented Systems Management Server 2003 that we knew there was an opportunity for improvement in how we update software and deploy operating systems," says Karl Snowden, Infrastructure Manager, Desktop and Networks at Royal Mail Group.

For example, software updates could take more than one week to push out to computers—even the most critical security updates. And even then, only 80 percent of desktop computers were running the latest software with updates. "We struggled to reach all of the computers with our previous process, but 20 percent of our PC fleet was not updated at any given time," explains Snowden. "That means that 20 percent of the organization's computers had the potential to open up network security risks and disrupt business operations."

Similarly, operating system deployments were manual and time-consuming. "When we upgraded to Windows XP, we were able to automate some processes, but it still took up to three hours for each build," says Snowden. "Plus, often times, we had to send a system engineer to attend to the migration process."

In addition to being a time-consuming process for the IT department, operating system deployments were also disruptive to employees. For instance, employees had to manually back up all of their data, and sometimes required the assistance of a system administrator. In time for its upgrade to Windows 7, the Royal Mail Group wanted not only a deployment

process that was easy for the IT department to manage, and that was efficient and affordable, but it also wanted a process that would not be disruptive to its employees.

"We needed as light a touch deployment as possible," says Snowden. "One of the first questions we asked ourselves was, 'How do we upgrade the operating system without disrupting users?' What we envisioned was a process where users could confirm that they were ready to upgrade, then step away from their computer for an hour or so for lunch or a coffee break, come back, and have an upgraded operating system, with all of their user settings, documents, and other files restored."

Solution

In May 2011, Royal Mail Group engaged technology partner CSC, a member of the Microsoft Partner Network, to find a way to better manage its disparate IT environment and make IT business operations more efficient, particularly in preparation for the planned upgrade to Windows 7. Together, the companies decided to launch a large-scale project with the following technology goals:

- Implement Microsoft System Center 2012 as its system management solution, specifically to enable automated, unattended operating system deployment, manage desktops, provision virtual machines, monitor systems, and automate IT workflows.
- Build a private cloud storage solution that would help improve the user experience for data backup and enhance data security.
- Expand the Hyper-V virtualization environment at Royal Mail Group to better take advantage of the organization's Microsoft Enterprise Agreement.

Participated in a Microsoft Technology Adoption Program

CSC participated in the Microsoft Technology Adoption Program (TAP) for System Center 2012 on behalf of Royal Mail Group. Through the program, the companies explored new features of the System Center 2012 products, focusing on using System Center 2012 Configuration Manager to manage its desktop environment and the Operations Manager component of System Center 2012 for flexible infrastructure monitoring. CSC also plans to use Virtual Machine Manager, another component of System Center 2012, to monitor systems and provision virtual machines in its Hyper-V environment. "I've been involved in a number of TAPs in my IT career, so I have something to compare with the Microsoft TAP for System Center 2012. In short, we have found it invaluable," says Alistair Doran, Solution Director at CSC.

Continues Snowden, "And having access to early versions of System Center 2012, combined with working with a competent technology partner and receiving support from Microsoft Services through the TAP were all critical to the success of this project."

Built a Private Cloud Storage Solution; Delivers Automated Software Deployments

After learning about new features in System Center 2012, CSC first implemented System Center 2012 Configuration Manager for a small pilot group of 200 employees across multiple departments at Royal Mail Group, which represents a cross-section of different roles across the company. In production, the team will deploy the Configuration Manager client to computers running Windows XP prior to the operating system upgrade.

By installing System Center 2012 Configuration Manager to computers running Windows XP, Royal Mail Group can take full asset inventories for each computer prior to upgrading the computer to Windows 7, identify and mitigate any unsupported applications, or upgrade any required hardware or drivers. By December 2012, all 27,000 computers at Royal Mail Group will be running Windows 7, along with Microsoft Office 2010, and will be managed through a central location with System Center 2012 Configuration Manager. On an ongoing basis, Royal Mail Group will use Configuration Manager to also deploy new software applications and software updates to all of its computers.

In addition to automating operating system deployments and software updates with System Center 2012 Configuration Manager, CSC also developed a private cloud storage solution to give employees at Royal Mail Group an easy, automatic way to back up computer data prior to the employee's specific operating system upgrade date. The private cloud storage solution is built on Windows Server 2008 R2 with Hyper-V, and is cohosted at both the Royal Mail Group data centers and the CSC data centers.

To facilitate the operating system deployment, employees at Royal Mail Group simply log on to a custom, self-service portal that was developed by CSC and choose a date and time to upgrade. The employee's user data, documents, and files are then automatically encrypted and backed up to the private cloud prior to the operating system deployment. Then, at the scheduled time, the operating system is automatically deployed through System Center 2012 Configuration Manager, all of the user data is pulled from the private cloud storage and provisioned to the employee's PC, and the employee has a

working computer with the latest operating system, productivity software, and all of their applications, settings, documents, and other files—in about 60 minutes. "It is a light-touch deployment that is almost fully automated and doesn't cause too much disruption to the employee's day," says Snowden. "Employees can go grab a cup of coffee, go to a meeting or lunch, and come back to an updated, fully operational computer."

Royal Mail Group continues to use the private cloud as a backup solution. Now, instead of relying on employees to manually back up their data at inconsistent intervals, data is backed up to the private cloud storage solution every 15 minutes after their computer has been upgraded to Windows 7. Plus, the organization implemented Windows BitLocker drive encryption. So, in the event that a portable computer is lost or stolen, the data is safeguarded and the employee can easily restore the most-recent backup.

Expanded—and Automated—Server Virtualization Environment
As part of its efforts to increase efficiency with its IT infrastructure, Royal Mail Group also began expanding its Hyper-V environment. CSC is helping Royal Mail Group consolidate the three servers—a print server, file server, and domain controller—each at 116 larger remote locations onto one physical host running three virtual machines. In total, this will result in 116 physical servers running 348 virtual machines.

In addition to its branch offices, Royal Mail Group is expanding its Hyper-V deployment in its data center. By the end of 2012, the company expects to migrate 36 of its application servers to Hyper-V. It will then evaluate new service requests and

existing server hardware as candidates for virtualization.

Royal Mail Group uses Virtual Machine Manager to manage its Hyper-V environment, including to automatically provision new virtual machines in the data center, for its private cloud storage solution and at branch locations. For its branch locations, Royal Mail Group uses Virtual Machine Manager to provision virtual hosts from bare metal servers on which no previous software or operating system has been installed. The company is also evaluating using new features in Virtual Machine Manager to manage its remaining VMware servers in the future. And to provision virtual machines at its branch offices, Royal Mail Group uses the Orchestrator and Service Manager components of System Center 2012 for end-to-end automated life-cycle management.

Benefits

As a result of working with CSC to implement Microsoft System Center 2012 components and create a private cloud storage solution built on Windows Server 2008 R2 with Hyper-V, Royal Mail Group is well on the way to achieving the IT efficiency gains it desired. Still early in its deployment of Windows 7, Royal Mail Group expects to reduce support costs related to the desktop by up to 20 percent. The organization is increasing IT efficiency through centralized management and enhancing data security with its private cloud. One of the most important outcomes of the large-scale project, however, is that the IT department at Royal Mail Group has dramatically improved the user experience for its employees.

Reduces Desktop Support Costs up to 20 Percent
Royal Mail Group now relies on a fully automated, centrally managed deployment process for software and operating systems, thereby reducing the number of highly skilled system engineers that it must send to branch locations to attend operating system deployments. "We would not have been able to achieve this level of automation without System Center 2012 Configuration Manager," says Snowden. "We expect that, by using Configuration Manager combined with our private cloud storage solution, we will be able to save 15 to 20 percent annually in desktop support costs alone."

In addition to reducing desktop support costs, Royal Mail Group will also reduce the amount it spends on physical servers. For instance, it is consolidating 348 servers at remote locations down to only 116 physical servers with Hyper-V running 348 virtual machines. "By reducing our reliance on physical server hardware, we could potentially save 33 percent in hardware costs," says Snowden. Royal Mail Group is not only taking advantage of its existing Enterprise Agreement, but it is also reaping savings in licensing costs. Instead of paying for a license with each virtual machine, the company can run up to five virtual machines with one license for Windows Server 2008 with Hyper-V.

Increases IT Efficiency
Royal Mail Group no longer needs to deploy as many system engineers during operating system deployments—only on rare occasions will an engineer's assistance be required during a widespread deployment. By using System Center 2012 Configuration Manager, the organization has fully automated its deployment process, even to its most remote locations. "In many cases, we had to send engineers

> "We've made [data backup] very easy by using Hyper-V to build a private cloud storage solution that automatically backs up computer data every 15 minutes when an employee is logged on to the network. Employees always have a backup of critical data."
>
> Alistair Dorann, Solution Director, CSC

to employees' desks and have them attend to the entire migration process, which took two to three hours," explains Snowden. "Now, the entire migration process takes approximately 60 minutes and does not require a skilled technician, so we can use those valuable skills for more strategic tasks."

The organization is also more efficient when it provisions virtual machines, even those that it provisions from bare metal. "Prior to using Virtual Machine Manager, the provisioning process took at least four hours," says Dorann. "By using Virtual Machine Manager, a technician can provision a virtual machine from bare metal in fewer than five minutes."

Enhances IT Security—Desktops and Data
By using Configuration Manager to deploy software updates and Operations Manager to monitor its desktop computers, Royal Mail Group expects to increase updates across its PC environment—from 80 percent of machines to 100 percent. "We have never been able to get our entire fleet updated with current software, including any critical security updates that might otherwise expose threats to data security. With System Center 2012 Configuration Manager, we will be at 100 percent for once," says Snowden.

In addition to ensuring that all computers are updated with the latest software, Royal Mail Group now has a solution to ensure a higher level of data security, particularly for its 12,000 portable computers. Previously, the IT department had to rely on users to manually back up their data, documents, and files; now, Royal Mail Group automatically backs up data stored on PCs to a private cloud for safe-keeping. "There's a risk that employees won't back up their data when it requires another task in their

day and when it's a manual process," says Dorann. "We've made that very easy by using Hyper-V to build a private cloud storage solution that automatically backs up computer data every 15 minutes when an employee is logged on to the network. Employees always have a backup of critical data."

Improves User Experience for Employees
Royal Mail Group has also improved the user experience for employees during the organizationwide upgrade to Windows 7. The organization replaced the previously time-consuming, disruptive process with a seamless process that is finished in a matter of minutes. "Previously, operating system deployments could take up to three hours to complete—that's three hours where an employee is interrupted and unable to work productively," explains Snowden. "Now, employees have greater control over the schedule of their specific migration, their data is automatically backed up, and 30 minutes later, they have a working computer with an updated operating system and all of their settings and files restored. This wouldn't have been possible without CSC as a technology partner and technologies like System Center 2012 and Hyper-V."

For More Information

For more information about Microsoft products and services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (877) 568-2495. Customers in the United States and Canada who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5234. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to:
www.microsoft.com

For more information about CSC products and services, call (703) 879-1000 or visit the website at:
www.csc.com

For more information about Royal Mail Group products and services, call visit the website at:
www.royalmailgroup.com

Microsoft System Center 2012

Microsoft System Center 2012 helps your organization achieve IT as a service by enabling productive infrastructure, predictable applications, and cloud computer on your terms. With System Center 2012, use a self-service model to deliver flexible and cost-effective private cloud infrastructure to your business units while capitalizing on existing data center investments. Applications run your business, so System Center 2012 is designed to offer deep application insight combined with a service-centric approach to help you deliver predictable application services. Finally, by using System Center 2012, you can deliver and consume private and public cloud computing on your terms, with common management experiences across both.

For more information on Microsoft System Center 2012, go to please visit:
www.microsoft.com/en-us/server-cloud/system-center/2012.aspx

Software and Services	Hardware

• Microsoft Server Product Portfolio
  − Microsoft System Center 2012
  − Windows Server 2008 R2 Datacenter
• Windows 7 Enterprise
• Technologies
  − Hyper-V
	• HP Servers, HP and Lenovo Desktops, NetApp storage
	
	Partners
	• CSC
	• Microsoft Services

Microsoft®