Microsoft Desktop Optimization Pack
Customer Solution Case Study

Healthcare Firm Uses Virtualization to Speed Application Delivery, Improve Productivity

Overview

Country or Region: United States
Industry: Healthcare

Customer Profile
Missouri-based RehabCare Group partners with more than 1,200 hospitals, skilled nursing facilities, and long-term care operations across the United States to deliver rehabilitation program management services.

Business Situation
RehabCare needed a way to efficiently deploy software across many locations, eliminate application conflicts, and manage its dispersed computer environment.

Solution
With help from En Pointe, RehabCare virtualized its applications and automated software delivery and IT system management, using Microsoft® Application Virtualization and System Center Configuration Manager.

Benefits
- Accelerated application deployment and updates
- Increased productivity
- Improved asset tracking, compliance
- Enhanced reliability, service, and support for remote work force

"By removing installation disruptions and most computer management tasks from the therapists' day-to-day activities, we're freeing them to focus on patient care."

Mike Brimberry, Lead Systems Engineer, RehabCare Group

RehabCare Group provides rehabilitation program management services for more than 1,200 facilities across the United States. The three IT staffers in the company's Client Technology Services group found it challenging to efficiently manage its 150 applications and 2,500 desktop and laptop computers, while supporting a large mobile work force. By switching to virtualization using Microsoft® Application Virtualization and System Center Configuration Manager, RehabCare cut the time for large-scale deployments of new applications from weeks to less than one day, delivered application updates 80 percent faster for a savings of 1,200 IT staff hours per year, improved asset tracking, and enhanced reliability and service for widely dispersed employees. Just as important, it increased end-user productivity, freeing therapists to focus on patient care instead of software installations.

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Mike Brimberry, Lead Systems Engineer, RehabCare Group

Situation

Founded in 1982, RehabCare Group is a St. Louis, Missouri–based provider of rehabilitation program management services for more than 1,200 hospitals and other rehabilitative sites across the United States. RehabCare is committed to using leading-edge technologies to support these operations and provide rehabilitative treatment to its patients across the entire continuum of care. However, the three IT staffers in the company's Client Technology Services (CTS) group often found it challenging to efficiently manage 150 applications and 2,500 desktop and laptop computers for a dispersed and highly mobile work force.

Lengthy Software Deployments

Deploying software was a largely manual, time-consuming effort. "We did some application compatibility testing, which could take anywhere from one day to a full week to work out bugs and create workarounds, but there was always something that would break down in the field," says Mike Brimberry, Lead Systems Engineer for RehabCare Group. "Users had free rein to install other software, and there was no way to track what was on their computers and, therefore, what would conflict with the new software."

In a worst-case scenario, CTS had to provide about 30 employees with two computers each so that they could separately run Epicor Financials and Sage FAS Fixed Assets, which used different versions of Crystal Reports, without compromising the stability of their computers.

Because most of the RehabCare computers used slow dial-up or Digital Subscriber Line (DSL) connections, CTS would typically ship CDs containing a new application to the care facilities. Preparing for large deployments could take CTS staffers several weeks to create CDs, labels, and installation documentation, and then thousands of hours in coordination and troubleshooting efforts. On site, rehabilitation therapists had to install the software themselves, taking about an hour for each PC. Not only were the therapists reluctant to take time away from patient care to install software, but RehabCare operations suffered when they did.

"RehabCare Group is a business of minutes. Every minute a computer-related task takes a therapist away from treating patients represents a drop in productivity and can add up to a corresponding loss of millions of dollars in billable services," says Brimberry.

Inconsistent Software Updates

Software updates were also problematic. Mobile workers—typically in RehabCare management—would often wait until they returned to corporate headquarters to have the help desk install an update. All other users would receive a CD to install. But because CTS had no information about the software residing on users' computers, it had no way to know whether users installed the update or if it was successful.

"An unsuccessful update could result in vulnerabilities that allow viruses or malware to infect the PCs," says Brimberry. "We would have to spend time reimaging to get computers working again and then send the new image to the users, or our help desk would have to spend time talking users through the process of trying to fix the problem themselves. It was a mess."

"By automating distribution of new and updated software, we're able to concentrate on increasing remote facilities' productive time and be more proactive in ensuring compliance and security."

Mike Brimberry, Lead Systems Engineer, RehabCare Group

Not only was security at risk, but critical hospital operations could also be affected. For instance, RehabCare uses a Medicare-mandated application for billing in-patient therapy sessions. Whenever Medicare updates the software, which can be several times a year, users have a specified amount of time to implement the update. Because RehabCare cannot submit invoices if it is not using the most current Medicare application, CTS had to ensure that users updated the application on time. "The help desk would get a flood of calls every time that we had to update key applications like this," says Brimberry.

RehabCare needed a way to efficiently deploy software, eliminate application conflicts, track software updates, and manage its dispersed computer environment. "Our business is continually growing, and as we added new facilities our issues regarding software delivery, update compliance, and productivity became even more problematic," Brimberry says. "We wanted a solution that would enable us to streamline processes, increase our control, and reduce our risk."

Solution

Brimberry had heard about application virtualization and thought it could help address his company's software compatibility issues. RehabCare evaluated VMware ThinApp but chose Microsoft® Application Virtualization because the company was running Microsoft Systems Management Server 2003 and planning an upgrade to Microsoft System Center Configuration Manager 2007 for its enhanced software deployment capabilities and asset intelligence technology. RehabCare wanted a virtualization product that would work well with the system management software.

"We wanted one console to deploy and track traditional and virtual applications," Brimberry explains. "System Center Configuration Manager and Microsoft Application Virtualization delivered this capability. In addition, the Application Virtualization Sequencer, which packages the applications, employed a process similar to one that we used in the past with Wise Package Studio, so we had a high comfort level moving to the Microsoft technology."

In August 2008, Client Technology Services staffers tested Microsoft Application Virtualization, part of the Microsoft Desktop Optimization Pack (MDOP) for Software Assurance, in its lab. It ran Microsoft Office Professional 2007 as a virtualized application and Office Professional Edition 2003 as an installed application on the same computer. "We saw the benefit of virtualization right away: It totally eliminated the problem of application conflicts," Brimberry says. "We then repeated the test for our management team. [The managers] understood how much virtualization could improve our software delivery and management, and immediately approved the project."

RehabCare installed System Center Configuration Manager 2007 in September 2008 and used it to deploy 500 Application Virtualization 4.5 clients during fall 2008. In the first year, RehabCare virtualized 21 applications, including Microsoft Office Professional 2007, Microsoft Dynamics® GP 9.0, Visual Staff Scheduler Pro 11 from Atlas Business Solutions, and FutureSoft MultiView 2000. It expects to have the

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majority of its 150 applications virtualized by April 2011.

In February 2009, RehabCare engaged En Pointe Technologies, a provider of computer hardware and software licensing products and IT services. En Pointe helped RehabCare switch from System Center Configuration Manager mixed mode to native mode, which is more secure because it provides better authentication, encryption, and signing capabilities. This enables RehabCare to manage computers in care facilities (as well as laptops used by mobile workers) that are connected to the Internet but not the corporate network. En Pointe also configured a public key infrastructure so that the remote computers could communicate with and be managed by the System Center Configuration Manager server.

"En Pointe provided tremendous value in managing … critical configuration and deployment processes," says Brimberry. "Equally important, the company's expertise in Microsoft licensing management helped to ensure that we understood the scope of our Microsoft Enterprise Agreement and that we utilized its full capabilities."

Says Matthew Ondrejko, Director of En Pointe Technologies, "We worked closely with RehabCare IT staffers, training them on the Microsoft products so that they could take advantage of key features and realize the maximum flexibility and efficiency benefits. Being a one-stop shop for licensing and deployment services also enabled us to ensure that RehabCare fully implemented the solutions it purchased and derived the greatest value from its investment."

Looking ahead, RehabCare plans to upgrade to System Center Configuration Manager 2007 R2 SP2 and Application Virtualization 4.6 by the third quarter of 2010 to support the Windows® 7 operating system. The company is planning to upgrade from Windows XP in 2010 to take advantage of Windows 7 security features including BitLocker® drive encryption and DirectAccess for mobile users accessing corporate resources.

For the upgrade, RehabCare will use the operating system deployment capabilities of System Center Configuration Manager. To facilitate the deployment process and ongoing management, the company expects to use two additional technologies in the Microsoft Desktop Optimization Pack: Enterprise Desktop Virtualization to run applications that are not yet compatible with Windows 7 in a virtual environment running Windows XP, and Advanced Group Policy Management to control Group Policy change management processes.

Benefits

Using application virtualization and IT infrastructure management technologies, RehabCare deploys new software and updates much more quickly, improves asset tracking and compliance, and enhances reliability and service for end users. Just as important, therapists now can focus on patient care instead of software installations.

"Using Microsoft application virtualization and management technologies has had a huge impact," Brimberry says. "By helping us streamline and strengthen key processes, Microsoft enables us to efficiently handle the needs of a growing business."

EN POINTE® TECHNOLOGIES

"The application sequencing in Microsoft Application Virtualization is twice as fast and more robust than traditional software re-packaging."

Mike Brimberry, Lead Systems Engineer, RehabCare Group

Accelerated Application and Update Deployments, Increased Productivity

Packaging virtual applications is much simpler than traditional applications. "The application sequencing in Microsoft Application Virtualization is twice as fast and more robust than traditional software repackaging," says Brimberry. "Because it does a better job of monitoring and capturing the software installation, our whole packaging process is more streamlined."

Once an application is sequenced, it typically takes about 30 minutes to put it into the System Center Configuration Manager environment and then just 20 to 30 minutes to deliver to client computers. As a result, RehabCare has cut the time for large-scale deployments of new applications from weeks to less than one day, and eliminated the need for therapists to install their own software.

RehabCare also saves time in update deployments. As soon as an update is approved by Client Technology Services staffers, it is automatically sent to all assigned computers. Updates take at least 80 percent less time to deploy, saving about 1,200 IT staff hours per year, and that has a positive effect on RehabCare operations.

"Not only have we reduced manual installations, but by automating the distribution of new and updated software, we're able to concentrate on increasing remote facilities' productive time and be more proactive in ensuring compliance and security," Brimberry says. "Equally important, by removing installation disruptions and most computer management tasks from the therapists' day-to-day activities, we're freeing them to focus on patient care."

Improved Asset Tracking and Compliance

Using the asset intelligence technology in System Center Configuration Manager gives RehabCare complete visibility into its hardware and virtual and traditional software assets, who is using which resources, and where they reside. This helps CTS ascertain, for instance, whether critical applications were successfully updated on target users' computers.

"We can automatically track all of our assets and run detailed reports, such as which computers have been updated, which use a certain software version, and how much RAM each one has," Brimberry explains. "This is important because it provides management with the data needed to make purchasing and licensing decisions for reviews and renewals, and helps ensure compliance with licensing agreements and corporate software usage and update policies."

Enhanced Reliability and Service

Because applications are virtualized, end users no longer need to have administration rights and, therefore, cannot make inadvertent changes. "Not only does this improve the stability of end users' computers, but by combining greater IT control with the elimination of application conflicts, we [also] reduce help-desk calls considerably," says Brimberry.

With virtualization, RehabCare can respond much more quickly to user requests for access to applications. Instead of requesting an application through CTS, whose staffers then would need to copy and ship the user a CD for installation, the company can move these types of requests to less expensive level-one support. A user can call the help

desk, which simply adds the user to the appropriate Active Directory® service group. The software is then immediately delivered to the user. Instead of taking three to four days to fulfill these types of requests, it now takes less than one day.

Because RehabCare is eliminating application conflicts, it no longer has to supply users with multiple computers. "Users benefit because they now work from a simpler, consolidated environment. And CTS staffers don't have to support those additional computers, so we save 60 hours per year of management time," Brimberry says.

Enhanced Support for Remote Work Force

Now that RehabCare uses System Center Configuration Manager in native mode, mobile employees who are on the road and remote users in facilities that are not on the corporate network can easily get updates. "As long as users are connected to the Internet, they can get everything that they need," notes Brimberry.

And because CTS allows for disconnected use, these people can access their virtual applications even when they are not on any network. Users have the same flexibility that they had with installed software in terms of when and where they use applications.

For More Information

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For more information about RehabCare Group, call (800) 677-1238 or visit the Web site at:
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Microsoft Desktop Optimization

Microsoft Desktop Optimization Pack (MDOP) for Software Assurance makes it easy for an organization to administer its applications, offering tools for virtualizing and inventorying software installations, for managing Group Policy settings, and for system repair and data recovery.

For more information about MDOP, go to:
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