Brown Shoe

Brown Shoe Company stays light on its feet with VDI from Wyse, VMware and Dell

Challenge: Travel light and move quickly

Although some may not be familiar with Brown Shoe, many people have worn its shoes: Brown Shoe puts more than 100 million pairs of shoes on the feet of women, men, and children around the world each year. It sells its shoes--including Naturalizer and Dr. Scholl's, Via Spiga and Sam Edelman - through partnerships with department stores, national chains, and independent retailers, as well as through its own retail stores, catalogs, and e-commerce sites, including Famous Footwear and Shoes.com. A global company with sales of $2.2 billion, Brown Shoe operates in a competitive environment and must keep costs low, maintain high productivity, and stay agile across all its operations.

"To keep overhead low, we had only two engineers and five support techs to service 4,000 desktops," explains Kevin Baldus, manager of client and collaboration services at Brown Shoe. "Managing PCs took up a disproportionate amount of their time. We needed to reduce maintenance time and costs, while also providing users with a more reliable and consistent desktop experience to help boost productivity. We also wanted desktop solutions that were faster and easier to deploy, so that we could be more agile—in expanding or opening offices, providing new associates with desktops and training, and extending the new solution to additional groups in the company."

When Brown Shoe's server group virtualized its servers with VMware ESX, Baldus and his team were impressed by the resulting cost efficiency and flexibility. The team saw an opportunity to make similar gains by creating a virtual desktop infrastructure (VDI) to manage internal users' desktop environment-- including applications—and provision new internal users. An opportunity arose when an office in Madison, Wisconsin was consolidated into the company's headquarters in St. Louis, Missouri. The team deployed a pilot implementation of 300 virtual desktops to provide the transferred staff access to the resources they needed. Following the success of that transition, Baldus' team has continued to replace traditional PC computing software platforms with virtual desktops in one group after another.

Viewpoint

' Adopting virtual desktops using VMware View makes so much sense just on the maintenance savings and increased productivity that we've seen in every implementation. But we've also proven that VDI helps us respond more quickly to the changing needs of the business. '

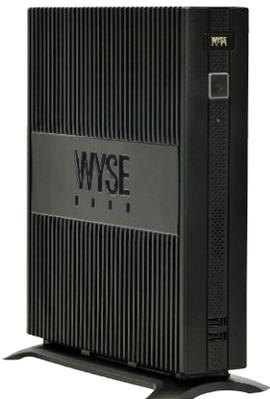**KEVIN BALDUS, MANAGER OF CLIENT AND COMMUNICATION SERVICES, BROWN SHOE**

BROWN SHOE

DELL

vmware®

Customer:

- Brown Shoe Company, Inc.

- Global net sales of more than $2.3 billion in 2009

- Locations in St.Louis, New York, Canada, China and Italy

Wyse R class thin client

Solution: VDI Meets the needs of multiple departments

Today, Brown Shoe's customer service call center, software development, distribution, purchasing, and training teams all work with approximately 800+ Wyse thin-client devices based on Wyse ThinOS and with Wyse TCX virtualization software to enhance the user experience for multimedia. The VDI team uses Wyse Device Manager (WDM) software to manage the thin-client devices, individually and in groups. VMware View delivers desktops as a managed service to these devices from the St. Louis data center, where 13 VMware ESX servers with vSphere run up to 800 virtual desktop machines. Eight Dell 805 dual quad core servers with 64GB of RAM and five Dell 710 servers with 74GB of RAM host the VMware ESX servers, and a Dell EqualLogic PS6500 SAN system offers 48TB of storage. Internal users' data is always stored on the SAN system, enabling them to work from each thin client as though it were their own dedicated PC.

At the consumer service helpdesk, associates use CCbrowse, an in-house application built on Internet Explorer. Its management and administrative tools enable helpdesk staff to answer customer questions and facilitate product returns and replacements by e-mail and phone. Whether staff work from the St. Louis call center or from off-site locations, the application tracks their work, recording video and audio from each call for quality assurance and training purposes.

At Brown Shoe headquarters, developers and consultants have implemented an extensive deployment of SAP HR and finance applications, as well as a product lifecycle management (PLM) application based on a product called Flex PLM. The team works on 60 Wyse V10L thin clients, running the Microsoft Office Suite and specialized development and project management software.

The company's distribution centers now run entirely on Wyse thin clients. In those centers, thin clients in offices and on the warehouse floor run Microsoft Office and inventory management applications and interface with barcode scanners. Office staff can create and view reports using the company's Internet Explorer-based application, while warehouse staff can manage inventory and shipping. With the Wyse thin clients, office workers can leave their cubes and log on to any thin client in the warehouse to access their own personal desktops, plug numbers into reports, send e-mails, or check facts in real time.

Staff training is very important to helping Brown Shoe bring on new associates and get them up to speed quickly. Because staff work with Brown Shoe's own applications as well as standard packages such as Microsoft Office, they might not be familiar with the tools they need to do their work. With 120 thin clients replacing PCs, the training team can train new staff in the latest version of any of the company's applications.

Benefits: Low maintenance, higher productivity, and greater flexibility

The benefits Baldus has observed to date inspire him to identify other use cases for VDI deployments. "Wherever possible, we want to take advantage of the low maintenance, productivity boosts, greater flexibility, and cost savings we can get from VDI," he says.

Ease of maintenance saves money and resources

Using VMware View and Wyse Device Manager, the team keeps its virtual desktops operating at peak levels with fewer staff than traditional desktops would require.

"We just don't have down time any more, and our virtual desktops don't need local support," explains Jason Vogel, senior specialist and data architect at Brown Shoe. "We've lost two of our five support techs, but we haven't had to replace them, because our thin clients and VDI are so much easier to manage than desktop PCs."

Doug Westhoff, senior specialist and data architect at Brown Shoe, recalls that he chose VMware View because it seemed to be the most configurable and expandable solution available to create the company's virtual desktop environment, with the lowest overhead. "That's been proven by our experience – we spend very little time maintaining the back end of the system," says Westhoff.

"On the front end, the Wyse ThinOS and WDM make managing the Wyse thin clients easy," adds Vogel. "Whether we're addressing one user's problem or implementing an upgrade across all our servers and virtual desktops, maintenance tasks take very little time."

Using VMware View for virtual desktops eliminated most of the security problems that used to take up technicians' time. "Technicians frequently had to repair infected desktop units, and it would take about two hours to address," says Vogel. "Thin clients aren't affected as much by viruses and malware because security decisions come from the data center, not from the users. If a machine does get a virus, we can just delete the machine and add a new one—problem solved. Plus, we refresh the OS every three months, which is much more often than the PC, so we eliminate any buildup of issues. If we have any problem on a thin client, it takes at most five minutes to resolve—that's as long as it takes for a user to call tech support and reboot the machine."

"In the two years that we've had our VDI solution, I've only been called outside of business hours four times," adds Vogel. "Back when we had PCs, I could expect 40 calls every year. It's great."

Challenge:

- Reduce IT maintenance costs
- Improve productivity and performance
- Enable greater business agility

Better application performance increases business productivity

The VDI solution also delivers Brown Shoe users better and more reliable application performance, resulting in greater productivity for the business. For example, call center metrics improved noticeably after the deployment, with some agents completing more calls per hour. When Brown Shoe set up a side-by-side comparison of a PC and a VDI unit with the same build, the VDI outperformed the PC by more than 30 seconds per call per user. Many customers and agents began reporting greater satisfaction due to faster system response times and elimination of system and PC down time.

Issuing thin clients to the consultants and programmers working on Brown Shoe's SAP projects also proved highly productive. Consultants joined and left the project to fulfill the objectives of each stage, but no work was lost in the transitions because it was stored centrally. Plus, all team members were always working with the latest versions of applications and data, so there were no problems with team members using different versions of tools. "We went live on our target dates for all three systems," comments Baldus. "This was a huge win, especially given the magnitude of the project and its importance to the company." As a result, Brown Shoe began benefiting from its development investment almost immediately.

In Brown Shoe's distribution centers, associates report that systems are always up and deliver fast response times to queries and orders. "With the EqualLogic SAN dedicated to our VDI environment, we've measured more consistent and faster responses, which means we fill orders more promptly, so we keep our shoes in stock for retailers and consumers," says Baldus.

Users like that their virtual desktops always looks the same once they log in. "They can move from one thin client to another and still be at their own desktop," says Westhoff. "This makes it easy for employees to be productive right away even when they're moving from office to office or working from home."

Agility enables Brown Shoe to profit from opportunity

Virtual desktops help Brown Shoe respond more rapidly to opportunities and requirements as they arise. For example, the company can now increase the number of agents handling calls during peak seasons, without having to build out its physical call center. "We employ remote agents working from home as well as backup call centers when we have high volumes," explains Vogel. "All we need to do is offer them remote access to VMware View. We gain the ability to respond to increased demand, but we don't lose any control – we can still monitor agent performance and any call issues."

Thin clients also enabled Brown Shoe to add developers as needed to scale its software projects and help it meet its deadlines. As requirements for the project changed, Baldus' team made adjustments on the back end and was able to provision any needed capacity or tools consistently to all team members within hours. The Dell EqualLogic SAN has helped, too. For example, to create a clone of a fully provisioned 10GB image now takes half as long as it used to, with the Dell EqualLogic 6500 SAN leveraging 22TB of usable space and VMware's new Multipathing.

Wyse V class thin client

VDI versatility enables the training team to help new employees become productive rapidly. "Each of our 120 PCs could only support some of our corporate applications, and might even have older versions of the software on them," comments Baldus. "With VDI, we can train 120 people at one time in the latest version of any of our applications."

Fast set-up of hardware enhances agility, too. "When we replaced PCs with VDI in our training rooms, we set up 120 thin clients in less than a day," says Vogel. "It takes just 15 minutes, at most, to get a thin-client device out of its box and ready for action, while it would take at least an hour and a half to set up a PC."

Cost savings boost margins, now and later

Baldus sees thin clients delivering cost savings in both the short and long term. "We previously replaced desktop PCs every four years," he says. "I expect the thin-client devices to last about twice as long, so we'll save an entire cycle of hardware refresh every eight years."

Already, Brown Shoe is seeing energy savings: thin clients use approximately one tenth of the energy of a PC.

ROI factor	ROI calculation	Annual Cost avoidance
Reduced cost of implementation	90 minutes to set up a PC, 15 minutes to set up a thin client	750 hours saved in setting up 600 thin clients
Administrative savings due to greater security	2 hours down time/staff time to resolve issues such as viruses on a PC; virtually any thin client issue can be fixed in 5 minutes with a reboot	With an average of 150 virus and other security-related events per year, avoided 300 hours spent on repair for 600 thin clients
Ease of maintenance, availability, and reduced downtime	2-5 hours down time/staff time spent maintaining a typical PC per year	Avoided 1500 hours of downtime and IT time spent on repair for 600 thin clients
Longer life cycle: desktop hardware cost savings	Using the same thin client for 8 years instead of buying 2 PCs over the same period saves $330 (the initial cost difference)$560 (the full cost of a PC) for a savings of $890 per unit	Projected $534,000 in desktop hardware savings over 8-year period ($890 x 600 units)
Longer life cycle: other cost savings	1,000 staff hours per replacement cycle of 600 PCs	$50,000 in IT staff time savings per replacement cycle
Reduction in support overhead	Eliminated need for 2 FTEs for desktop support at $40,000 each	Savings of approximately $80,000 per year
Lower electricity consumption	Energy savings of –approximately $12 per thin client annually	For 600 thin clients, annual savings of $7,000

Managing the Transition

The VDI team at Brown Shoe included both a server engineer and a desktop engineer—and in retrospect, the team wouldn't have it any other way.

"VDI is really about both sides," says Baldus. "Because we had server and desktop expertise, we were able to implement with a full understanding of the entire project, and establish complete control of the virtual desktop environment from end to end."

For example, Westhoff, the team's server expert, helped ensure they were taking full advantage of the flexibility and scalability of VMware View solution, the Dell servers, and the Dell SAN. Vogel, the desktop expert, leveraged Wyse Device Manager for ease of administration and also implemented Wyse TCX virtualization software for better multimedia performance, which became increasingly important to the implementation as projects expanded to include additional applications with more multimedia requirements.

Conclusion: More VDI on Brown Shoe's Road Map for Success

The Brown Shoe team has plans for additional deployments of its new VDI solution, such as a 600-unit implementation in its new sourcing and sample-making offices in China. Closer to home, it already has 600 Wyse R90 devices with Windows XP Embedded in its retail stores for time entry, reports, inventory look-up, training, self-service, and HR applications. "Ultimately, we plan to use these devices as thin clients, but they're so versatile that we can use them as PCs for now, saving ourselves the cost of a hardware refresh when we put in support for PCOIP and swap them over to VDI," says Baldus.

Approximately 25 percent of desktop units at Brown Shoe are already thin-client devices, but Baldus has a roadmap of projects for wider deployment of VDI. "By 2012, I'm planning to have 80 percent of our desktop units be thin clients," he says.

The desktop team knows it can count on the full support of senior management in funding additional virtual desktop deployments. The combination of Dell hardware and SAN infrastructure, VMware View, and Wyse thin clients has proven it can deliver what the company needs to compete in the fast-moving footwear fashion market. "Adopting virtual desktops using VMware View makes so much sense just on the maintenance savings and increased productivity that we've seen in every implementation," comments Baldus, "But we've also proven that VDI helps us respond more quickly to the changing needs of the business. All together, it makes VDI an easy decision for Brown Shoe."

"We just don't have down time any more, and our virtual desktops don't need local support. We've been able to decrease the size of our support tech team because our thin clients and VMware View are so much easier to manage than desktop PCs."

KEVIN BALDUS, MANAGER OF CLIENT AND COMMUNICATION SERVICES, BROWN SHOE

Wyse C, V and R class thin clients

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