Return on investment is one of the hallmarks of information technology. It’s typically measured in dollars saved or dollars earned; sometimes in time savings, other times in uptime.

There are perhaps hundreds of ways to measure ROI, but it’s rarely been measured in footsteps. But that’s precisely how Wesley Baker, Virtualization Architect, at Jewelry Television has measured the success of his virtual client deployment at their Knoxville, TN call center. According to Wesley, “Prior to implementing our Wyse virtual clients, our IT team was in the call center 1 or 2 times every day trouble-shooting one issue or another. Since completing our implementation in February 2008 we’ve been in the call center 1 or 2 times over an entire year. In my mind, there’s no clearer sign that the deployment has been a success than the simple fact that I don’t have to walk over to the call center any longer.”

Jewelry Television reaches more than 65 million viewers in the United States, and millions more via its Web site, www.jtv.com. As a result of such a large audience, the company has become one of the world’s largest jewelry retailers. As the business has grown, so too has the call center. Today, approximately 300 call center representatives handle more than 6 million calls per year and thousands per day during the peak holiday season.

Built for Speed

Following Jewelry Television’s acquisition of some of the assets of the Shop at Home Network, the company realized it needed to scale its call center, and quickly. The need to scale was complicated by the fact that Jewelry Television’s existing thin clients could not support the inventory management system that came along with the Shop at Home acquisition. In January 2008, company executives established a six-week deadline to find a virtual client solution that was compatible with all of the organizations’ existing applications, as well as connect to Shop at Home servers for order processing.

“We already had thin clients in place, but the ones we had couldn’t support the kind of applications we needed,” said Baker. “So in a matter of only a few weeks we looked at all of our client and
virtualization options. It was when we realized how well Wyse virtual clients integrated with VMware’s Virtual Desktop Manager that we began to breathe a little bit easier. As soon as we got the underlying infrastructure up, everything just meshed.”

**Wyse: a great decision**

At this point Wesley and his team had only two weeks left to meet their deadline. “We placed our orders with Wyse and VMware immediately, ordering 350 Wyse V10L clients to support our 300-person call center,” added Baker. “We got the licensing going with VMware and had four connection servers with VMware View set up right away. We very easily put every single call center application on a Windows XP image, and then quickly integrated that image to make the Shop at Home order processing work. I can’t say that I would ever want to repeat those six weeks again, but in retrospect we made a great decision for the company and the solutions we put in place have proved invaluable.”

Just prior to rolling out the new devices, Baker and his team set up a staging area near the call center where all 900 call center representatives were trained within a matter of days. “They took to the Wyse clients immediately,” said Baker. “They were particularly impressed with how quickly they could log on and get to work.”

Moving away from their earlier architecture had additional benefits for the IT team. Prior to the switch to Wyse and VMware, the daily support requests from the call center would come in at any point during the day or night. Because the prior architecture lacked remote log-in capabilities, Baker and his team would be getting calls in the middle of the night and having to drive to the call center to resolve those issues.

“Less than two years ago, we had an IT management nightmare,” said Baker. “In addition to the daily support issues, we had to have a total of 30 servers up and running to support our previous thin clients and the CSR applications. Today we have a total of 4 connection servers and 6 ESX hosts, which host all 300 virtual machines. To go from 1 support call per day to 1 call per year is just amazing, and we couldn’t have done it without the great products from VMware and Wyse. The way they just worked together so well made everything else easier. Our support costs for the Wyse/VMware solution is as close to zero as possible.”

**Media Company Requirements**

As a broadcast company with a strong focus on customer care, Jewelry Television wants their CSRs to have access to the same information as their customers. This means that every CSR is watching a live broadcast of the cable program. Just a few years ago, this would have required televisions on each desk – an expensive proposition as well as one that would take up valuable desk space. With advances in virtual client technology, particularly the Wyse TCX virtualization software suite, Jewelry Television is able to have their CSRs access the television broadcast via live stream to their virtual desktops utilizing multimedia redirection.

“When people think of virtual clients and call centers, I’m sure they think of simple order processing, task worker stuff,” added Baker. “Nothing could be further from the truth. Our CSRs are not only accessing sophisticated inventory and order-management applications; they are also using their virtual clients to watch a live stream of the Jewelry Television show. It’s important for our CSRs to be looking at the same offers as our customers and potential customers. We needed a virtual client that could act in many ways just like a television. Wyse gives us that with their TCX capabilities.”

The TCX suite delivers a variety of solutions all designed to improve the end user experience, including audio, video, multi-screen support and USB support capabilities. The technology solution is the infrastructure upon with Baker can continue to expand upon and improve the CSR experience. One part of the TCX suite, TCX Multimedia, is particularly important at Jewelry Television. Because TCX Multimedia offers multicast support, Jewelry Television is able to deliver the same multimedia...
stream to multiple users simultaneously. This is how the television broadcast is delivered to CSRs. With multicasting, individual packets can be delivered to multiple endpoints simultaneously. This utilizes significantly less network bandwidth than if the media stream was replicated for every user.

“The infrastructure is there with Wyse TCX Rich Sound to begin using our virtual desktops as telephones, eliminating yet another cost,” added Baker. “We also see a good deal of potential in using Wyse virtual desktops as part of a work-at-home program that could result in savings on real estate, power, and other physical support costs.”

Future Plans

In addition to the 300 call center representatives, Baker also has made the virtual desktops available to his executive team and other locations throughout the company. Virtual desktops are installed in many of the conferences rooms. In addition, kiosks are set up throughout the company for employees to access information such as benefits and other HR-related information. The executive reaction to the Wyse product was an unexpected surprise.

“I didn’t expect the reaction of the executive team to be as enthusiastic as it was,” continued Baker. “Once they saw what these devices were capable of, most of them requested a Wyse client set up at every single desk they might possibly sit at. It’s simple enough to accommodate these requests and is helping to contribute to an overall phase-out of PCs. The plan now is to roll out virtual desktops in every department as part of our ongoing PC replacement cycle.”

Solution architecture

<table>
<thead>
<tr>
<th>Clients</th>
<th>350 Wyse V10L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Software</td>
<td>VMware View, Wyse WDM for tracking firmware versions, MSFTP for delivering .ini files to thin clients, MSAD for managing user and virtual machine assignments and policies.</td>
</tr>
<tr>
<td>Applications</td>
<td>In-house oracle forms based apps and web apps, OWA for email.</td>
</tr>
<tr>
<td>Servers</td>
<td>8x Dell 6850’s with 4x, dual-core processors and 32GB RAM each for VMware vSphere XP-VM hosting, 2x MS Server 2003 32-bit VMs running VMware View 4.0 for brokering connections.</td>
</tr>
<tr>
<td>Network</td>
<td>1000Mb/s server connections, teamed across multiple network interfaces per host for capacity, with 100Mb/s going to the thin clients.</td>
</tr>
</tbody>
</table>

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