Challenge: Security Causing Performance Hits in Virtual Environment

United Way of Atlanta is one of the largest branches of the non-profit organization, and serves 13 counties surrounding the metropolitan Atlanta area. Each year, from August through December, the fundraising campaign increases the demands on the organization’s data center and infrastructure. Virtualization has offered a cost-effective platform for scaling services during the busy season.

Initially, virtualization was introduced for support servers. When the benefits were proven, the organization virtualized its production servers, too. Most of the year, the data center hosts about 80 virtual machines. During the fundraising campaign season, that number increases, ranging from 100 to 150 virtual machines.

In addition to virtualized servers, virtual desktop infrastructure (VDI), based on VMware View, has also been introduced at United Way of Atlanta. “VDI is our growth area, and we continue to expand it to support our temporary staff,” said Orinzal Williams, the executive director of IT for the organization. “It just made sense to go in this direction. Two years ago, we deployed about 10 Wyse thin clients, and the trial was very successful. We’ve now expanded to 50 virtual desktops.”

Virtual servers and VDI have introduced a cost-effective and flexible model for the United Way of Atlanta’s data center. However, with the progress came the need to adjust the security solutions in the new environment. “The more we virtualized, the more we saw performance hits,” said Williams. “Communications would be impacted every time security updates were pushed out. It was not so severe that users noticed, but we saw it happening and realized that our agent-based endpoint security was not going to scale in our virtual environment.”

Solution: Agentless Security Drives Down CapEx and OpEx

The IT team researched security for VMware environments. A wealth of online information and YouTube video tutorials piqued their interest in Trend Micro Deep Security. The next step was to contact their Trend Micro reseller, Softchoice, in Atlanta.

“Softchoice put me in touch with a local Trend Micro representative, and helped us in our evaluation process,” said Williams. “After the initial discussions, a webinar, and follow-up with a technical expert in the region, we decided that Deep Security was the product that we wanted. A 60-day free trial was deployed, and we were really happy with what we saw.”
The security team at Softchoice supported United Way’s choice of the Trend Micro solution. “We have seen increasing numbers of medium-sized businesses turning to VDI to drive down CapEx and OpEx, especially for remote endpoints such as kiosks,” explained Shane O’Grady, the Trend Micro Business Development Specialist at Softchoice. “United Way of Atlanta is a typical example—and they have had to address the typical pain points associated with virtualization as well. Deep Security avoids the problem of simultaneous updates, and also provides virtual patching capabilities. No one else comes close to what Trend Micro can do to secure VDI.”

After installing VMware vShield and building the foundation for hypervisor-level security, the deployment of Deep Security was a quick process. “It took about 8 hours start to finish—and that was just me doing the installation of Deep Security,” said Williams. “I’m not a Trend Micro expert, so that was how long it took including reading the documentation and doing other things. It was a relatively easy process.”

United Way of Atlanta installed the four standard Deep Security modules: anti-malware, web reputation, firewall, and deep packet inspection. The installation went smoothly, and the rules were adjusted and configured to protect the organization and allow employees to get their jobs done without putting assets at risk. Deep Security, a VMware-ready solution, has now been in place for the last year.

“In the technology industry, you see a lot of over-promising and under-delivering,” said Williams. “Not the case with Trend Micro! I love Deep Security. It runs really well and it does everything as advertised. I’m really happy with it. In fact, we are now considering deploying two more Deep Security modules: integrity monitoring, and log inspection.”

**Effective Protection at the Hypervisor Level**

The IT team has seen the difference in the level of protection offered by Deep Security. One attack hit their data center when a user downloaded a screensaver virus onto the organization’s main file server.

“Deep Security was able to detect the attack and stop it—the virus was literally frozen in its tracks,” said Williams. “It was isolated and that was it. Most viruses start by looking for the antivirus software and disabling it. With Deep Security, there is nothing to disable. The protection is outside of the virtual machine. Because of this, Deep Security definitely offers us more protection.

“When a virtual machine is attacked, Deep Security can stop it immediately and clean up is therefore simple. With traditional endpoint security, the recent attack would have taken down that server and files would have been corrupted. We would have to go back and restore the system. Today, with Deep Security, threats are stopped and the bulk of the server is still viable and in use while the threat is managed. Hypervisor-level security really works.”

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- Shane O’Grady, Trend Micro Business Development Specialist

Softchoice, Chicago, Illinois
Immediate Protection in the Cloud

Deep Security also gives United Way of Atlanta a layer of protection in the cloud. The Trend Micro™ Smart Protection Network™ cloud-client infrastructure collects global threat intelligence to deliver proactive protection from emerging threats.

“Trend Micro is a leader in the way they gather intelligence,” said Williams. “With Smart Protection Network, Deep Security has access to the latest threat information—this is a huge benefit to us. The fact that Trend Micro is gathering intelligence in a proactive manner—not just reactive—is wonderful. We feel very confident, and we are very happy with the direction Trend Micro has taken to evolve security.”

Flexible Platform Support

United Way of Atlanta is now making another change in the data center. “We are deploying Cisco UCS server platforms,” explained Williams. “The Cisco hardware will further reduce our footprint and allow us to cut the number of hosts by half. We are happy to see that Deep Security is validated on Cisco UCS; this was a positive factor in our UCS decision.”

Results: Business Continuity Along with Efficiency Gains

By pointing United Way of Atlanta to the Trend Micro solution, Softchoice helped the organization maximize the returns on its investments in virtualization. “Information security is growing tremendously—it is extremely mission critical for our customers and is a priority segment of our business,” said David Floyd, enterprise account manager, Softchoice. “My experiences with Trend Micro have always been really good, and United Way is a good example. We get excellent support from the local representatives. Between Trend Micro and our Softchoice security specialists, we have been able to give United Way exactly what they need.”

Prior to deploying Deep Security, United Way of Atlanta had five VDI hosts and 10 other hosts for server activity. With the increased efficiencies of the new agentless security deployment, the organization has been able to remove two of the VDI hosts and four server hosts. The biggest efficiency gains have been seen on the server hosts.

Flexibility has been another major benefit gained from virtualization, and Deep Security has proven to be well aligned with the evolving VMware environment and Cisco servers and networks that support United Way of Atlanta. “Deep Security has been a very good fit in our data center, and provides excellent protection for our virtualized servers and desktops and our continually changing environment,” said Williams. “I love it.”

Business continuity is also very critical for United Way of Atlanta. Virtualization and Deep Security have not only minimized risks of disruptions in their main data center, but are being used to protect their disaster recovery (DR) facility.

“Virtualization has given us the ability to handle major incidents without disrupting business,” said Williams. “We have enough capacity in our virtual environment such that we could lose a third of our servers and still maintain operations. Our building is our

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biggest risk, which is why we have an off-site disaster recovery facility. And with Deep Security, protection for cyber threats is automatically extended to those remote servers. Even if our central Deep Security server goes offline to a power outage, the agents on each host still operate to defend the virtual machines.”

The remote United Way of Atlanta data center is also virtualized, and critical applications are replicated and kept up to date at that site even when it is not supporting operations.

“We are a community organization, and we have to be available even in the event of a disaster,” said Williams. “With Deep Security protecting our disaster recovery site, we can still operate even in the event of a major outage at our main data center site. We have identified our critical applications on our email, file, web, and database servers, as well as the communications applications that enable our Cisco telephones—Deep Security protects all of these. If we switch over to our remote site, we know that we can still support our community without worrying about attacks.”

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