

Virginia Tech Taps Kaseya VSA to Streamline Operations, Tackle Tough IT Problems



Richard “Billy” Wesley, IT manager for the Division of Student Affairs at Virginia Tech has relied on Kaseya VSA for over 5 years to help manage IT operations for his group.

Five years ago a key IT staffer left Virginia Tech’s Division of Student Affairs, taking his hard-earned knowledge with him. The group was in a quandary.

“There wasn’t a lot of documentation and no one backed that person up who knew how to take the reins. We did an internal audit and realized these folks needed a full-time backup. It could be kind of expensive to hire another full-time person for every full-time person,” Wesley explained.

At the same time, the group had an overly complex way of managing its IT. “We decided to consolidate the different IT areas in the division — which is what we did. We had resources all over the place managed in lots of different ways. We had two different domains, and different Active Directories. We had computers managed by two different areas that might be just down the hall from each other. We needed something to bring all of those endpoints together,” Wesley said.

Fortunately, a colleague was familiar with Kaseya VSA. “We gave it a shot and we’ve been using it ever since,” Wesley said.

Challenges of Student Turnover

Wesley’s group supports students working on campus, such as dining halls or student unions. “A lot of students don’t need access to our systems, but in some cases they do. One of the challenges we face is bringing those students on board into our systems, and then offboarding them when they leave so they don’t have access to stuff they don’t need anymore,” Wesley said. “Student turnover is pretty quick. Students come in; they work for you for four years and leave. Or students work in one place for three months, then work in a different place for four months, or they’re working at two different places at the same time. That’s a challenge.”

VSA makes onboarding and offboarding a snap. And with the help his team has already received, Wesley is looking to automate onboarding even further. “We have plans to create an online form for creating new accounts that integrate into the Service Desk to create tickets for us automatically. That way we know what kind of access a certain person needs or where that person is going to be working.”

Offboarding is just as important as bringing systems online. “We use automation in the Service Desk. When I get notices from managers whose accounts need to be turned off or disabled, I’ve got automation. I use a particular status within the Service Desk that’s called off board. When I change those tickets into that status it automatically fires a note off to the HR department so they know these people are leaving in case they want to do an exit interview,” Wesley said.

Proper offboarding is critical for security. “When you come into the campus you get an account which is in the main domain. Those accounts never really go away. You could be a student for four years, graduate, and come back and work here and still be using that same account. If nobody ever said this person doesn’t work for us anymore, that’s a problem. The further off it gets, the harder it is to see what’s going on,” Wesley said.

Problem Solving Made Easy

The Service Desk doesn’t just set up and decommission access, it also solves everyday problems. “We use it as a normal help desk system as far as the end users are concerned. We have the agent icon setup so when they double click it goes into Service Desk, and they



Kaseya Customer

Virginia Polytechnic Institute
and State University (Virginia Tech)
Division of Student Affairs
Blacksburg, VA
www.dsa.vt.edu

The Virginia Tech Division of Student Affairs “is committed to the growth, development, and achievement of students at Virginia Tech. This organization works closely with academic colleagues to support students as they learn to be successful and effective leaders in the emerging global community,” the university explained.

The division’s IT group aims to make these students’ IT experience safe and secure, with stable systems and a superior end-user experience.



can create new tickets. They click in and we associate said agent with said person depending on which computer it's on so we can see where they're coming from. We have their phone number, their location, their name, what they need and the ability to expedite that out to our Service Desk technicians quickly so the task gets taken care of," Wesley explained.

Live Connect Makes Remote Control Incredibly Simple

VSA Help and Service Desk start the problem solving process, and VSA Live Connect finishes the job. "Once Service Desk has done its job and we've got the ticket in and categorized, Live Connect allows us to quickly get to a person's computer. It keeps us from having to use what we refer to as 'sneaker day,' where we run across campus," Wesley said. "If there's a foot of snow on the ground, I can remote into somebody's computer. I can even run things in the background without them even seeing what we're doing so we don't have to interrupt their work."

Virginia Tech uses VSA 9.3. However, with VSA 9.4 Live Connect they can manage computers that don't have an agent installed, a feature Wesley is looking forward to. "We're excited about that as well as the ability to run packages right out of Live Connect. We have a few PowerShell scripts we run from time to time, and it would be nice to package those and fire them off straight from Live Connect," he said.

Live Connect is Wesley's favorite VSA feature. "It helps Service Desk technicians get to computers quickly and drives them in the direction of how we're going to do things. They have agent procedures that we can fire off to fix a particular thing," Wesley said. "We use it to manage all of our endpoints and use it for doing third-party updates. With Java, whenever there's a new version we have an agent procedure to update the installers. We also use it for inventorying, auditing and patching — those are all big things for us."

Tight Systems Control

In Wesley's shop, end users typically don't have admin rights. Fortunately, if they need something, such as a printer driver, VSA is more than happy to oblige. "We don't tend to give any sort of administrative rights. As far as printers go, we have group policy and we have OUs [Organizational Units] so if a particular computer needs printing the group policy fires off and it automatically installs," Wesley said.

Patching Done Properly Through Automation

The No. 1 way hackers have successful exploits is against unpatched computers. The bad guys dissect the patch, figure out what the hole is, and develop an exploit to go against that hole. Proper patching blocks these exploits. "It's nice to see what patches we have and how many patches have successfully installed to local machines. We have about 800 endpoints and the majority of those are desktop computers," Wesley said.

In the early days Wesley patched computers the old fashioned way. Without a patch management tool, systems were updated on a one-by-one basis. Now automation is the key. "Back in the day, when patching, we had to go to each office and each computer, check the updates and run the updates. It takes a lot more time, a lot more manpower. VSA has saved us an immense amount of time," Wesley said.

VSA is designed to provide IT automation, which Wesley defines as "using technology to complete tasks without the need for human intervention." It is one of the things Wesley wants to do more of.

As mentioned, patch management is a key area where IT automation is applied. "Since we can set up silent installs and have the system do it for us, we can schedule it at times when folks aren't at work. They aren't at their desks if we need to reboot the computer. We can schedule it at night or on the weekends and can also make sure that the same process is happening on each machine," Wesley said.

VSA also helps keep Java updated. This is critical, as Java is now one of the most exploited pieces of software, making it a huge security risk. "With our Java updater, we check registry keys to see if Java is even on the machine. I can run the update; it will check and see if there is a registry key. If it says Java is on this machine, it will uninstall the current version and install

Organizational Challenges

- Managing hundreds of endpoints with a tight IT staff
- Keeping endpoints patched and updated
- Onboarding and offboarding students and keeping pace with frequent student turnover
- Freeing admin and support time so IT staffers can become more strategic

the new version. If it doesn't see it, or we don't want Java on this machine, it won't install it. With applications like Java, it's better if they're not installed in the first place," Wesley said.

VSA also gives the status of patched systems. "You can easily tell what machines are patched. Probably 90 to 95 percent of the machines are up to date with patches. Before VSA, that was a hard number to gauge. By the time you got every machine patched you would turn around and have to start over patching them again. Those kinds of statistics really show value," Wesley said.

The Value of Auditing

Auditing is high on the list of VSA features for Wesley's group. "With auditing, once you have the endpoint and the agent, you can scan the endpoints and it brings in a whole bunch of information about the hardware, the software, printers, and network connections. When you have so many computers, you don't see each one every day. Sometimes they slow down or you see that some are not coming online. The information within the auditing module helps deduce what's going on," Wesley said. "We use mostly Dell computers. In the audit module with the service tags we can just click to Dell's website for that machine and see warranty information, when it was bought and other things which are quite useful."

Automation Equals End-User Satisfaction

Managing IT assets in the background and automating IT functions benefits end users. "With IT, if the systems are doing what they're supposed to do, the organization doesn't tend to notice. We want users to be able to do their job and find their data because information sharing and information storing are a big part of our job," Wesley said.

Virginia Tech actually measures that end-user satisfaction. "We have a customer satisfaction survey automatically sent out from Service Desk when tickets are closed. We have around a 98 percent satisfaction rate. So yes, people do notice," Wesley said.

The group also tracks data about end-user service. "We've been using VSA for five or six years, and just with Service Desk, we've closed 10,000 tickets that were opened in that timeframe. That's probably only capturing 65-70 percent of the actual tasks that we're asked to do," he said.

Freeing Time for Strategic Thinking

IT automation is doing something previously done manually. If IT is not dealing with a lot of grunt work, it can be more strategic. For instance, it can think about where the infrastructure is going and new applications it might want to bring on board. Automation "gives me and my colleagues more time to have a higher-level view of the organization. With turnover and people moving in and out of departments, having the time to actually interact is important. For instance, if I have a Service Desk technician with skills in a particular area and the skill is needed on one side of campus, I can staff that person over there," Wesley said. "The time VSA has saved that can be used to learn more about the organization and how it functions is a huge benefit."

There are technologies such as Microsoft 365 and SharePoint that Wesley's group has recently implemented that might have been tougher if he was spending all his time solving low-level computer problems. "We have all sorts of systems on campus. We have event management systems that we use for reserving spaces and for our student organizations. We do upgrades to those systems as well as our dining systems. VSA gives us more time to focus on planning and upgrading the systems so they continue to function," he said.

Advanced Auditing

Applying custom fields with the audit module helps the university department with its inventory. "There are certain types of information we need to get out of the system quickly to make sure that our inventory matches up with the inventory of our central system," he said. "If we need to replace computers it gives us a good idea of what computers are older and what computers have warranties that have expired," Wesley said. "Most of the reporting I'm doing now is pulling the inventory out of our system so we can send it over to our fixed-assets folks. They can compare and make sure the inventories are up to date so that we don't have to update several different systems on our own."

Key Benefits

- Consolidation of network management tools and simplification of IT infrastructure.
- Ability to closely and remotely manage endpoints for configuration, patching, problem resolution, and problem solving.
- Low-level manual IT tasks are replaced by IT automation, making operations more efficient and less error prone.
- Auditing gives IT insight into resources, allows them to identify and access problem systems, and supports proper budgeting.
- Live Connect lets support staff control and fix a remote endpoint, even while the end user is getting work done.

How an Inventory Helps with Budgeting

Having an accurate inventory through auditing helps the university division budget and plan for system upgrades. “We could know that we have 30 machines going out of warranty next year that we probably want to replace. We know what kind of machines they are, and our budgeting folks can make decisions as to whether they’re going to need the same type of thing or [if] it needs to be changed,” Wesley said.

Gaining System Stability Through Management

The Division of Student Affairs maintains tight control over its endpoints. As a result, these systems don’t have the problems that a lot of unmanaged PCs have. These unmanaged devices fall apart because they’ve been hit with viruses, so IT often ends up reinstalling the operating systems because the performance is so bad.

Wesley’s systems are far more stable because they’re so tightly managed. “We’ve had a lot fewer instances of machines being compromised since we brought on Kaseya. That’s because we monitor them so much closer,” he said.

VSA gives Wesley deep insight into endpoints. “The nice thing about the single pane of glass, particularly within the account managed agent view, is you can manage which columns you’re seeing. I can see the computer, the IP address, what building it is, where it is, what agent version is there, and what operating system. I can see so much information that is pulled straight from those machines with the agents,” Wesley said.

AuthAnvil and Two-Factor Authentication

The Student Affairs group isn’t concerned just with the security of its endpoints, but also with the safety of VSA itself. That is why it adopted AuthAnvil for multi-factor authentication into VSA.

“A password is just something you know. If you also have a physical piece of something, it makes it much harder to crack. If you can log into our VSA system, depending on the account you have access to, you could get to all of our endpoints and that’s a problem. We use AuthAnvil to make sure it is more secure to get logged into our VSA so nobody can sabotage our systems,” Wesley said.

Here’s how it works. “We use YubiKey so we have our soft tokens that are assigned. We use our AuthAnvil server to either reset or manage the soft tokens to the YubiKey for the users,” he explained. “Let’s say I had a part-time tech person leave. They would return their YubiKey, and we would reset the soft token by the serial number. When you log in, you put your username and password. Then you also have to do a PIN and a tap on the YubiKey in order for it to allow you to access the system.”

It’s one little extra step, but well worth that minor inconvenience. “It’s actually easier. If you access a domain controller and you need a 64-character password that is all sorts of different letters and characters, it is easier just to have that second form of authentication,” he said.

“Back in the day, when we had to do patching, we had to go to each office and each computer and check the updates and run the updates. It takes a lot more time, a lot more manpower. VSA has saved us an immense amount of time.”

Richard “Billy” Wesley

IT manager for the Division of Student Affairs
Virginia Tech

ABOUT KASEYA

Kaseya® is the leading provider of complete IT management solutions for Managed Service Providers and small to mid-sized businesses. Kaseya allows organizations to efficiently manage and secure IT in order to drive IT service and business success. Offered as both an industry-leading cloud solution and on-premise software, Kaseya solutions empower businesses to command all of IT centrally, manage remote and distributed environments with ease, and automate across IT management functions. Kaseya solutions currently manage over 10 million endpoints worldwide and are in use by customers in a wide variety of industries, including retail, manufacturing, healthcare, education, government, media, technology, finance, and more. Kaseya, headquartered in Dublin, Ireland is privately held with a presence in over 20 countries. To learn more, please visit www.kaseya.com

©2017 Kaseya Limited. All rights reserved. Kaseya and the Kaseya logo are among the trademarks or registered trademarks owned by or licensed to Kaseya Limited. All other marks are the property of their respective owners.

Rev 031717

