

Company Profile:

Virginia Tech's Outreach Information Services (OIS) provides technical support for the university's Outreach and International Affairs (OIA) office that helps solve societal, natural resource, and other problems, works with communities to address local – and global – economic development needs, tailors regional and online graduate and lifelong learning educational opportunities to the people served, and arranges opportunities for students to serve community organizations while learning.

Website: www.ois.outreach.vt.edu

Business Challenge: Faced with managing a geographically disparate IT environment with a small staff, Virginia Tech's Outreach Information Services needed a more efficient solution to ensure systems health and the availability of research data on the network. OIS also needed a more reliable tool to keep track of each project and the resources the university dedicated to it.

Solution: OIS deployed a remote, automatic systems management solution from Kaseya that gave IT staff a complete view into systems on the network, including resource utilization, capacity, and performance. Administrators are also able to track progress throughout the lifecycle of the project while ensuring systems are running optimally and security patches are installed consistently throughout the environment.

Remote Systems Management Solution Enables Virginia Tech's Outreach to Connect University Resources with the World

Like most universities, Virginia Tech's most important asset is its intellectual property. Leaders in a variety of fields conduct research on campus, pursue intellectual enlightenment, and strive to solve the world's problems while calling Blacksburg, Virginia home. It is vital that the school provide its faculty with a platform to cultivate talent and investigate academic pursuits. At the same time, Virginia Tech needs to provide opportunities for its faculty to apply knowledge in a real-world setting, encouraging interaction between university researchers and business, government, and community organizations.

The university division charged with making connections between Virginia Tech researchers and external organizations is the office of Outreach and International Affairs (OIA). This office matches university staff and resources with the needs of businesses, non-profit organizations, industry associations and local, state, and national government agencies. By applying results achieved in the classroom and in the laboratory to real-world applications, OIA helps disseminate university research results for the betterment of society.

For example, OIA manages two large research and development projects for the U.S. Agency for International Development and has conducted research projects for many other federal and state agencies, including the U.S. Department of Commerce, the Appalachian Regional Commission, Virginia Tourism Corporation, the U.S. Department of Agriculture, and the Port of Virginia Port Promotions. OIS has worked closely with the Virginia Film Office since 1996, when Virginia Tech engineers designed and deployed a Web-based database of potential film locations in the state, providing film directors with a centralized repository they could research before sending scouts out into the field. OIS continues to manage the system today.

Small IT Staff Tasked with Monitoring Distributed Infrastructure

OIA relies on several mission critical systems for their day to day operations. With a goal of "Five nines" (99.999 percent) availability, ensuring the reliability and integrity of these systems as well as redundant systems that need to be able to come online in short order are critical to daily operations. Just as important are the over 200 user systems that interact with and depend on these systems. To support OIA's mission, Virginia Tech developed Outreach Information Services (OIS) to research, initiate, design, create, and manage new and existing technologies and data systems.

OIS works with people internal and external to OIA to make sure a reliable infrastructure is in place to support OIA's mission. A small staff needs to monitor network resources and systems health, ensuring data availability and reliability. Unfortunately, managing a disparate computing environment spread throughout the world to support a global client base typically requires a large IT staff extensively trained in multiple technologies. OIS, like many other IT departments within state universities, faces budgetary realities that limit its staffing options.

"We have to manage a massive, distributed, data-intensive environment that totals around three terabytes of data," said Scott Farmer, director, OIS. "We're a small staff that is typically stretched pretty thin. We not only have to monitor performance and ensure systems are up and running, but we have to field day to day IT requests, maintain security, protect the data, and run regular backups. It can be a daunting task."

As a result of the large environment and small staff, basic help desk issues and larger downtime-related problems took longer to resolve than the organization's business needs required. Instead of being proactive, the IT staff found itself continually on the defensive, putting out fires and trying to maintain some semblance of infrastructure reliability. Staff also found itself on the road, often making on-site visits on campus and around the state. Occasionally, Farmer would have to travel hundreds of miles to resolve help desk issues, pulling him away from the office and his other duties. International travelers and facilities would have to bring or ship their systems in for service or repairs.

In addition to systems health, OIS has both internal projects as well as external sponsored-research projects. They must keep track of project activities and deliverables: what researchers are working on, what they are doing, and how long they spend doing it. The first two were tracked using a word document while tracking time spent would go by the wayside.

Remote and Complete Systems Management

OIS deployed Kaseya Enterprise Edition, a remote and automatic systems management solution that allows the IT staff to manage systems from a central location, monitoring for systems health, performance, and security vulnerabilities. The solution automates basic IT tasks from a distance and provides administrators with a complete view of systems on the network, cutting down on the need to schedule on-site visits.

OIS deployed the Kaseya client on the organization's desktop and laptop systems as well as 14 Intel-based servers running Windows 2003. The Kaseya solution allows administrators to view the heterogeneous environment of nearly 250 systems as one, or they can drill down to look at each individual system. After test driving the solution for less than a month, Farmer estimates it took them less than 60 hours to install the solution, configure the management console, and set up permissions. It now takes less than five minutes to deploy the client on a new system, a process that can typically be done remotely.

"The Kaseya solution is central to our day-to-day operations," Farmer said. "It allows us to take control of any system on the network and make sure it is running properly, with the correct security patches installed."

Efficient IT Leads to Improved QoS

As a result of streamlining IT operations, OIS is in a better position to manage the technology aspect of OIA's research projects, supporting the university's outreach mission. By automating basic IT tasks and eliminating on-site visits, administrators are free to concentrate more of their time on proactive projects like investigating other technologies that could further help disseminate faculty research results.

Key Benefits

- Network administrators are able to remotely access any system on the network regardless of physical location
- System availability is improved, ensuring researchers have access to the tools and data they need to work on projects
- Projects are completed faster and more accurately, leaving clients happy with the research services provided by the university
- Security is more robust through consistent patch management and security updates
- OIS is able to streamline basic IT tasks through automation, reprioritizing resources to more proactive projects

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Virginia Tech University

Kaseya Enterprise Edition helps OIS improve the availability of all systems on the network and improve response times for help desk issues. By being able to take control of users' systems remotely, Farmer estimates that his staff has reduced the typical response time from 30 minutes to less than five. The improved availability ensures that users have access to the tools and information they need and enhances the quality of service (QoS) the organization provides to its clients. Just as important, while staffing is still an issue, OIS has been able to achieve better and more reliable service throughout the distributed environment with existing staff and without creating more IT management pains.

Patch management features included in the Kaseya solution also enable OIS to monitor all systems to help ensure they are up to date with the latest security updates. This consistency ensures that viruses, worms, or other external security threats can not mine the system for vulnerabilities. Patch management is done automatically; however, administrators also have the ability to view patch status for any system at any time.

Kaseya's ticketing system also provides a means not only to record and manage IT tasks but also to make project tracking much easier. Reporting features allow OIS to quickly assess the status of each project and how much time researchers spend on various assignments, plus track their completion. This saves much time with auditing and accounting.

"The biggest IT benefit for us is the rich feature set the Kaseya solution provides. It combines systems management, remote access, security, patch management, asset tracking, help desk, and project tracking. It's a one stop shop that is open 24 hours a day," Farmer said.

In the future, Farmer plans to begin using Kaseya's backup capabilities to provide coverage for systems that cannot be backed up by its current backup and recovery solution. Using the two together, additional levels of data protection can be provided on critical data systems.