

Virginia Polytechnic Institute and State University



EMC Smarts software monitors the health of Virginia Tech's computing and communications complex

One of the nation's leaders in developing and using new instructional technologies, Virginia Polytechnic Institute and State University (Virginia Tech) is one of the top-50 research institutions in the U.S. It serves more than 25,000 students, has 100 main campus buildings, an adjacent corporate research center, and a worldwide information and research network.

In terms of IT investment and broadband availability to the campus community, Virginia Tech makes its location in Blacksburg, Virginia, one of the most wired towns in the nation. Its core network consists of multiple Cisco 6509 Catalyst and 6006 Catalyst switches containing dual MSFC routers running HSRP, and multiple Cisco 7507 routers all connected via Gigabit Ethernet. A legacy ATM backbone, which primarily supports Distance Learning Video Conferencing classrooms across Virginia, includes three 7507 routers, six Marconi ASX-200BX ATM switches, five ASX-200WGs, and one ASX-1000.

Given the network's critical role in the University environment, Virginia Tech needed a comprehensive network management solution that would support the discovery of root causes and allow for quick impact assessments relating to specific devices—without increasing systems management overhead—and EMC® Smarts® IP Availability Manager was the best fit.

“One of the main points that convinced us that EMC Smarts was the right choice was its easy implementation,” says Brian Jones, network engineering manager. “It only took two and a half hours to discover our entire network. It took a competing vendor three days to get all the pieces installed and to a point where the engineers could actually ping a device on the network. And the EMC Smarts installation took just 10 minutes. There was just no comparison.”

Once EMC Smarts discovered the network, Virginia Tech was able to automate realtime root-cause analysis, accurately diagnose authentic problems™, and assess specific impacts—all without adding a single systems administrator to the network engineering group.

“It’s a big benefit for us, because ongoing costs are difficult for us to justify in the budget,” explains Jones. “It was much easier to get the one-time funds to purchase the EMC Smarts solution and not have to worry about adding administrators.”

Dramatic business benefits help IT shine

Within three hours of installing EMC Smarts IP Availability Manager, Jones and his team were monitoring most of the network and registering valuable alarms concerning root-cause events. The ability to centrally monitor the whole network without assigning engineers to stand over each piece of the puzzle now saves Virginia Tech innumerable man hours.

“The functionality of the product really sold us. EMC Smarts works as advertised—it accurately determines root cause without forcing the network engineering group to sift through a conglomeration of alarms. Also, most network management programs do not indicate that specific router banks or power supplies have failed. EMC Smarts does, and it goes further by indicating whether there is any impact associated with a particular device going down. That’s a handy feature.”

Brian Jones
Network Engineering Manager

Response time to network failures also has improved dramatically, and consequently, network availability levels have consistently increased as well.

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A single, comprehensive, centralized solution saves time and money

Over time, Virginia Tech has incorporated a series of different proprietary managers to gain a granular view of the network’s components. EMC Smarts technology allows the network team to integrate these separate element managers under one comprehensive, centralized solution.

“EMC Smarts understands and interfaces with these systems, and if we have something that isn’t covered, EMC Smarts takes care of it quickly and brings it into the fold,” says Jones.

EMC Smarts Service Assurance Manager and EMC Smarts Adapters allow the University to integrate faults from every system across the entire campus—the network operations center, computer operations center, and video broadcasting services center—into a single monitoring platform.

“We’re more satisfied with EMC Smarts than we have been with any other systems management vendor—ever,” says Jones. “I also have been pleased with EMC Smarts technical support. They’ve been very responsive to our needs. From a PR standpoint, EMC Smarts makes our department look great within the campus community. We provide excellent availability across huge networks, our mean-time-to-repair is minimal, and everything runs smoothly.”



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