

School of Visual Arts integrates end-to-end network solutions to support emerging artists' needs.

Executive Summary

School of Visual Arts

- **Industry:** Higher Education
- **Location:** New York, New York
- **Number of Student:** 4,000

CHALLENGE

- Update infrastructure to accommodate emerging artists in online space

SOLUTION

- Deploy Cisco routers and switches for enhanced network bandwidth and centralized management
- Integrate Cisco Nexus 7000 solutions for scalable, resilient, and high-performance data center
- Adopt Cisco firewalls to protect course content and emerging artists' work

RESULTS

- Eliminates network downtimes to create stable virtual space for SVA community
- Saves thousands of dollars on energy consumption per year, enabling reallocation of funds to other student-focused projects
- Adopt Cisco firewalls to protect course content and emerging artists' work

Challenge

School of Visual Arts (SVA) in New York City is recognized as one of the nation's leading colleges of art and design. As a fully-accredited, four-year institution, SVA offers undergraduate, graduate, and continuing education programs to prepare students for an array of professional fields in or related to the visual arts.

With a faculty consisting of distinguished artists, critics, designers, and writers, SVA has over 4,000 students enrolled annually, representing over 65 countries across the globe. Degrees offered at SVA include: advertising, animation, cartooning, film, fine arts, graphic illustration, interior design, photography, and visual and critical studies.

SVA was originally established in 1947 as the Cartoonists and Illustrators School, and for decades a majority of SVA's students completed their projects in studios on campus, using paper, canvases, and other tangible surfaces. However, as art and design tools began to shift into the online space, and as the college opened programs centered around video and digital media, SVA realized a need to build out its information technology (IT) infrastructure to adapt to the changing needs of its academic community.

"SVA's infrastructure and systems growth was outstripping its capacity to sustain a reliable network," Brian Nakahara, director of IT at the School of Visual Arts. "We knew we needed to architect a new network from the ground up that would scale and enable us to sandbox our mutable environment. Therefore, we tasked our senior network engineer with developing an architecture for our campus-wide network and data center core that would meet our strategic vision for performance, security, scalability, and maintenance."

Solution

"When Mr. Nakahara came to me, he gave me a wide breadth to implement the network of the future," says Fishel Erps, senior network engineer at the School of Visual Arts. "SVA's network was in need of a restructuring and standardization that would be both cost effective and efficient. I decided that Cisco would be the best choice to meet our strategic vision of the future of our network."

To streamline the network, SVA implemented the Cisco® Hierarchical Model of topology. The model is a design approach with scalable "building blocks" that allow the network to meet evolving needs. New routers and switches were installed at the core of its infrastructure. This installation enhanced SVA's network bandwidth and helped enable simplified system configuration and deployment through centralized management, making it easier and quicker for the IT team to install programs, and diagnose and repair any network issues that faculty, staff and students might experience.

Art College Recreates Network Infrastructure



School of Visual Arts integrates end-to-end network solutions to support emerging artists' needs.

"SVA's infrastructure and systems growth was outstripping its capacity to sustain a reliable network. We knew we needed to architect a new network from the ground up that would scale and enable us to sandbox our mutable environment."

Brian Nakahara, Director of IT at the School of Visual Arts

"I have never encountered a product that is as consistently reliable as a Cisco product. From end-to-end, there is virtually nothing you can't do."

Fishel Erps, Senior Network Engineer at the School of Visual Arts

As SVA began to build out its new data center, it deployed Cisco Nexus® 7000 Series technology. The energy-efficient Cisco Nexus solutions integrate both hardware and software features to support cohesive virtualization. As a comprehensive, one-platform solution, the technology allows SVA to incrementally and cost-effectively add new programs and innovations to its network as the college's administration approves new programs, tools, and online resources.

Network security is an important component of SVA's upgraded infrastructure. Adopting Cisco ASA 5500 Series Firewalls maximizes the institution's operational efficiency by securely connecting its community, while helping ensure information is secured and hackers are kept out of the network. Similarly, the firewalls prevent course content and student work stored on the network from being stolen, plagiarized or falsely recreated.

After achieving superior network security, SVA integrated Cisco solutions to establish VPNs for its staff and administration. Cisco VPN technology helps enable a host computer to send and receive data securely across shared or public networks. With VPN technology in place, SVA's staff can connect remotely accessing data from anywhere around the world.

The robust, scalable and secure network has additionally enabled SVA to upgrade its telecommunications technology. The college determined that Cisco Unified Communications solutions would be the best choice to deploy voice over Internet Protocol (VoIP) and replace its legacy private branch exchange (PBX) phone system.

The Cisco VoIP technology reliably carries voice calls over the data network. In addition to creating a telephony system where a number of features including advanced call routing, voicemail, and contact centers can be utilized, the college now has the benefit of easily deploying remote offices utilizing VPN technology. This also allows for significant cost savings and an increase in performance and reliability by allowing the college to focus its efforts on one network, instead of two disparate networks.

Results

In integrating Cisco solutions, SVA has been able to reap a number of technological gains and cost savings. The comprehensive, end-to-end network technologies have created a stable, stand-alone IT infrastructure for the institution, providing the kind of connectivity that is essential to a community of artists and designers on the cutting edge.

The use of these technologies has created a more reliable and robust network for SVA, which helps to ensure student artists do not experience disruptions while they work online. Additionally, utilizing advanced Cisco dynamic routing, SVA has created a low-latency network that is extremely efficient and offers an environment with little-to-no unscheduled downtime. This means students can access the virtual tools and technologies needed to complete course projects and art assignments under the tightest of deadlines.

Art College Recreates Network Infrastructure



School of Visual Arts integrates end-to-end network solutions to support emerging artists' needs.

Product List

Routing and Switching

- Cisco ASR1001 Routers
- Cisco Catalyst® 3750-X Switches
- Cisco 3925 Integrated Services Router
- Cisco Nexus 7000 Series Switches for Data Center

Security and VPN

- Cisco ASA 5500 Series Next Generation Firewalls

Voice and IP Communications

- Cisco Unified Communications Manager (Call Manager)

Wireless

- Cisco Unified Wireless IP Phone 7925G

Using the Cisco VoIP solution, SVA's telecommunications network is now just as efficient and fault tolerant as its data network. "I received endless amounts of positive feedback after the transition," says Erps.

SVA's new data center has helped minimize the institution's carbon footprint and realize cost savings through IT energy efficiency. With Cisco switching and VPN technologies helping enable point-to-point access between buildings across the campus and from remote locations, SVA has significantly reduced power consumption and cabling as a percentage of the annual IT budget. As a result, the college is able to save thousands of dollars each year that can be used to enhance the overall student experience.

The upgrade has brought greater efficiency to the college's administrative staff as well. With SVA's admissions team traveling the world to recruit talent to enroll at the college, the Cisco VPN and VoIP technologies have provided a stable and flexible way for the team to connect back to campus and access data and information to better market the school.

Today, applications are on the rise and the institution's retention rate remains above 80 percent. The school attributes these findings, in part, to its dedication to offering programs and resources, including reliable, next-generation technology, that serve emerging artists' needs.

"I have never encountered a product that is as consistently reliable as a Cisco product," says Erps. "From end-to-end, there is virtually nothing you can't do."

For More Information

To find out more about Cisco Nexus, go to:
<http://www.cisco.com/go/nexus>.

To find out more about Cisco Unified Communications, go to:
<http://www.cisco.com/go/voice>.

To find out more about Cisco firewalls, go to:
<http://www.cisco.com/go/firewall>.

