University Enables Collaboration in the Classroom and Beyond

Duke University implemented advanced collaboration tools to support global learning, research, service, and operations..

FPO
(video here)
Format: FLV
Dimensions: 176 px X 99 px

Note: Adobe Acrobat Reader 9 is required to view the videos.

Executive Summary

DUKE UNIVERSITY

- Higher Education
- Durham, North Carolina
- 14,000 Students; 3,000 Faculty

CHALLENGE

- Educate next generation of global leaders
- Enable collaboration within and outside university
- Streamline day-to-day university operations

SOLUTION

- Cisco Unified Communications for voice, unified messaging, and contact centers
- Cisco collaboration tools for real-time, face-to-face interaction and community building
- Cisco Planning, Design, and Implementation Services

RESULTS

- Extended interactive classroom experience to people around the world
- Enabled students, faculty, and staff to collaborate anytime, anywhere
- Saved US$2.5 million annually in communications system support costs

Challenge

A private research university in Durham, North Carolina, Duke University is globally recognized for excellence in undergraduate and graduate education. The university's core values are learning, research, healing, and service.

Duke's strategic plan calls for harnessing information technology to achieve the university's mission. To that end, the Office of Information and Technology (OIT) provides communications and collaboration tools for global campuses and the medical center. "Collaboration is at the core of good teaching, learning, and research," says Greg Jones, vice president and vice provost for global strategy and programs at Duke. "It is also how innovation occurs, which is the focus of a good educational institution and what's needed in the 21st century."

As the economy slowed in 2008, Duke began a long-needed effort to upgrade or replace its increasingly costly private branch exchange (PBX) systems. University leaders recognized that investing to replace the platform with unified communications would reduce support costs while also enabling new types of collaboration for learning and administration. "The growth of specialization in the 21st century means that people have to work in teams to address problems effectively," says Peter Lange, provost for Duke University. "We want to think of Duke as having a networked global presence, not a campus here and a campus there."

Integrating collaboration into the classroom experience and university processes would require a solid network foundation, the collaboration applications themselves, and an experienced partner to guide the transformation.

> "Collaboration is at the core of good teaching, learning, and research. It is also how innovation occurs, which is the focus of a good educational institution and what's needed in the 21st century."
>
> — Greg Jones, Vice President and Vice Provost for Global Strategy and Programs, Duke University

Solution

As the first step, Duke engaged Cisco Services to help plan, design, and implement a Cisco® Unified Communications solution for the campuses and the medical center. "Staffing up to meet every emerging need is not possible," says Bob Johnson, senior director of communications infrastructure for Duke. "We rely on Cisco partners for lower-level complex tasks, and when we have tough challenges, we work with Cisco Services."

Over 18 months, Cisco Services and Cisco partner Presidio helped Duke consolidate its 80 separate telephone systems into a Cisco Unified Communications system supporting 32,000 phones. Faculty, staff, and hospital personnel save time by using Cisco Unity® unified messaging to view and play back voicemail messages from their email inboxes.

People on the Durham campus and other global locations can quickly reach each other. And all campus and hospital contact centers use Cisco Unified Contact Center to intelligently route calls to the first available agent with the appropriate skills in any location, providing a better caller experience.

> "Innovation happens when teams of collocated people with divergent views work on a shared problem. With Cisco TelePresence, we can be collocated even if we're in different countries."
>
> — Blair Sheppard, Dean of the Fuqua School of Business, Duke University

FPO
(video here)

Next, Duke began using its unified communications solution as the platform for advanced collaboration tools that are transforming learning, research, and university operations. For example, Cisco Services and partner IVCi designed and implemented a 140-seat virtual lecture hall in the Fuqua School of Business, delivering an immersive Cisco TelePresence™ classroom experience. Presenters in other global locations can join the class, appearing larger than life on 103-inch plasma displays at the front of the room. When a student in the virtual lecture hall presses the microphone button on the desk to speak, a camera zooms in on that section of the room, so that remote participants can see the speaker close up. "Innovation happens when teams of collocated people with divergent views work on a shared problem. With Cisco TelePresence, we can be collocated even if we're in different countries," says Blair Sheppard, dean of the Fuqua School of Business.

Duke plans to use other Cisco TelePresence systems in Durham and throughout the world for learning and service. One idea is to install a system in Moshi, Tanzania, so that doctors and researchers can interact face-to-face with colleagues in Durham and other sites throughout Africa without the time, costs, and carbon emissions of air travel. "The ability to communicate anytime, anywhere helps us put grant money to better use," say Johnson.

> "Cisco Unified Communications and collaboration technology is changing the way we go about the business of the university."
>
> — Bob Johnson, Senior Director of Communications Infrastructure, Duke University

University users are also beginning to collaborate using Cisco WebEx Social™, creating online communities where they can share video and documents, locate experts, see whether team members are online, and just click to connect. Students in the Duke MBA - Cross Continent program are experimenting with Cisco WebEx Social for group projects, and the Fuqua School of Business is exploring the possibility of using Cisco WebEx Social as a staff portal. "Unlike public social networking sites, WebEx Social lets us build secure communities so that we don't give up intellectual property rights," says Mark McCahill, a systems architect with the Duke OIT. McCahill, who also teaches an information science class, invites students to interact with him using Cisco WebEx Social, anytime they see he's online.

Product List

VOICE AND UNIFIED COMMUNICATIONS

- Cisco Unified Communications Manager
- Cisco Unified IP Phones 7962, 7942, and 7911
- Cisco Unified Contact Center Enterprise
- Cisco Unified Contact Center Express
- Cisco Unity Voice Messaging

COLLABORATION

Enterprise Social Software

- Cisco Show and Share®
- Cisco WebEx Social
- Cisco Pulse®
- Cisco Media Experience Engine 3500

Telepresence

- Custom Cisco TelePresence System in Virtual Lecture Hall
- Cisco TelePresence Systems 3200, 3000, 1300, 1000, 500

CISCO SERVICES

- Cisco TelePresence Planning, Design, and Implementation Services
- Cisco Custom TelePresence Integration Engineering Advisory Service
- Cisco Video Experience Service
- Cisco Unified Communications Essential Operate Service
- Cisco SMARTnet®

PARTNER SERVICES

- Design and implementation of custom Cisco TelePresence solution for Virtual Lecture Hall, by IVCi

Results

Cisco has become a trusted advisor to Duke, working side by side with university leaders to explore new ways to integrate advanced collaboration capabilities into the fabric of the university. "Cisco Services and the business units all operate as one Cisco," says Tracy Futhey, chief information officer for Duke. "I just have confidence that the right resources will be around the table to help us achieve our goals."

Quantitative and Qualitative Return on Investment

Consolidating dozens of separate PBX systems and contact centers onto a single Cisco Unified Communications platform is saving $2.5 million annually in support costs. "The value of technology is not all about dollars and cents, however," Johnson says. "The larger value is helping people accomplish their missions. Did we respond to a patient's call more quickly? Did we complete research sooner?"

Preparing Tomorrow's Global Leaders

Most importantly, Duke sees collaboration technology as a way to prepare students to live and work in a global society. For example, if the business school wants to have a conversation about introducing products and services in China, they can use Cisco TelePresence to bring together students in the United States, China, and Brazil. "The three groups interact with each other in real time, and we can have a rich and engaged case discussion," says Sheppard. "Now is an amazing time to be in a university because of the potential of technology to change the nature of learning."

Collaboration tools are also helping different academic departments come together to work toward a common goal, a notion called interdisciplinarity. Strategizing to improve global healthcare delivery, for example, concerns the university medical school, public policy school, law school, economics department, and business school. "To teach effectively, we need to break down these scholastic boundaries as well as geographic boundaries, Sheppard says. "When we do that, we create students who are prepared for the world we're about to hand them."

Community Building

Duke leaders also credit Cisco collaboration tools with helping to build and strengthen campus community. For example, the Office of Information Technology and Division of Student Affairs organize an annual filmmaking competition for freshman dormitories. Student teams from each residence hall are loaned a Cisco Flip™ camcorder and editing equipment so they can produce a short video describing first-year life at Duke. Students can also borrow Cisco Flip camcorders to create video blogs of their summer service projects through DukeEngage, as part of the Duke Digital Initiative.

Technical Implementation

The Duke Network has a 20 GB core, with gigabit uplinks, as well as 10-Gbps uplinks to support video sharing and research.

The Duke IT department is creating standardized configurations for its various international campuses. Some configurations are for limited-time programs, while others are for permanent campus buildings. "We expect faculty and students to visit different campuses, and they will have a consistent IT experience wherever they go," Futhey says. A Duke faculty member who arrives at the China campus and turns on a laptop will immediately connect with the same secure Duke network, with the same set of collaboration tools.

For More Information

To find out more about Cisco solutions for higher education, visit: http://www.cisco.com/go/highereducation.

To find out more about Cisco collaboration solutions, visit: http://www.cisco.com/go/collaboration.

To watch videos from and about Duke University, visit http://www.ondemand.duke.edu.

To learn more about Cisco Collaboration Services, visit: http://www.cisco.com/go/collaborationservices.

To join conversations and share best practices about collaboration, visit: http://www.cisco.com/go/joinconversation.

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at **www.cisco.com/go/offices**.