

Saudi Arabian University Virtualizes Collaboration Applications



University of Dammam is the first in Saudi Arabia to implement full Cisco collaboration solution on Unified Computing System.

EXECUTIVE SUMMARY

Customer Name: University of Dammam
Industry: Higher Education
Location: Dammam, Saudi Arabia
Number of Employees: 30,000+ Students; 1,500+ Faculty

CHALLENGE

- Attract top students and faculty by providing advanced information technology
- Enable faculty, staff, researchers, and physicians to collaborate across multiple campuses
- Minimize total cost of ownership (TCO)

SOLUTION

- Simplified organizational communications with Cisco Unified Communications, Cisco TelePresence, and collaboration applications
- Saved data center space by hosting applications on a central Cisco Unified Computing System
- Lowered management burden using Cisco Unified Communications Management Suite

RESULTS

- Helped enable faculty, staff, and researchers on any campus to collaborate with in-person experience
- Prepared to increase enrollment by offering distance learning
- Minimized data center space, power, cooling, and management costs

Challenge

Located in Saudi Arabia, University of Dammam serves more than 30,000 students enrolled in majors including medicine and other health sciences, architecture, computer science and IT, education, and administrative sciences. Previously a branch of King Faisal University, the university became independent in 2009 and today has 16 campuses spanning 700 kilometers (435 miles).

To attract top students and faculty, university leaders knew they needed to provide advanced communications and collaboration tools for learning, research, and administration. "Our 16 sites are widely scattered, and faculty and staff found it difficult and a waste of time to drive long distances to attend conferences and meetings," says Dr. Saad Alamri, dean of e-learning and chief technology officer for University of Dammam. "We saw unified communications as a way to overcome the challenges of a multicampus university and to empower campus users to collaborate with each other and colleagues anywhere in the world."

The other guiding principle for the university's IT strategy is virtualization. "Virtualizing applications instead of hosting each one on its own server would make the most of limited data center space and minimize management overhead for the university's IT staff," says Salah Addin ElShekeil, head of the network department for University of Dammam.

Solution

The University of Dammam now offers advanced voice, video, and collaboration services to faculty and staff at all sites, using Cisco® Unified Communications Manager, Cisco TelePresence®, and Cisco collaboration applications. All applications operate as virtual machines on the Cisco Unified Computing System™ (UCS®) in the central data center. “Cisco offered all of the collaboration capabilities we wanted, including telepresence and web collaboration,” says Dr. Alamri. “And only Cisco provides the underlying network, the applications, and the data center platform. Working with a single vendor simplifies support.”

Cisco Services provided design and implementation services for the Cisco Unified Computing System, and a local Cisco partner, Mohammed Mansour Al Rumaih, part of [MIDIS Group](#) and a Cisco Gold Regional Partner, implemented the Cisco Unified Communications and collaboration applications.

“In our vision, Cisco Unified Communication and collaboration applications will create new possibilities for research, teaching, and learning, anywhere, and on any device. We expect it to be an important asset as we continue to grow.”

— Dr. Saad Alamri, Dean of e-Learning and Chief Information Officer, University of Dammam

Cisco collaboration applications play an important role in instruction and administration at the university:

- **Voice:** Cisco Unified Communications Manager delivers voice services to approximately 3,000 faculty and staff on the main campus and remote campuses, and later will also serve King Fahd University Hospital. The University of Dammam was the first organization in Saudi Arabia to implement the new Cisco Unified IP Phones with Arabic-language keypads and softkeys. Approximately 50 university managers use Cisco Unified IP Phones 9900 Series, which support videoconferencing on high-resolution 5-inch color displays, and all other university staff use Cisco Unified IP Phones 8900 Series. “Placing a video call is exactly the same as placing a regular call,” says ElShekeil.
- **Custom applications for IP phones:** MMR, working with a Cisco certified third-party developer, is developing services that faculty and staff can access with the touch of a button on their Cisco Unified IP Phone. “For example, employees can see the monthly balance of their monthly phone-bill allowance,” says Mohammed Saleh, with MMR.
- **Cisco collaboration applications:** With Cisco Unity® Unified Messaging, campus users can more easily keep up with messages, because they can play back and manage voicemail, email, and faxes in one place, the email inbox. “Cisco Unified Presence shows whether colleagues are on the phone, helping staff reach each other directly instead of leaving voicemail messages,” says ElShekeil.
- **Telepresence:** Faculty and staff can meet with colleagues at other locations from conference rooms equipped with desktop Cisco TelePresence Systems connected to Cisco Unified Communications Manager. The university board meeting room has a Cisco TelePresence Profile 65-inch system, providing an immersive experience.
- **Contact center:** Cisco Unified Contact Center Express prompts people who call the IT help desk to indicate the nature of their call, and then intelligently routes calls to the first available IT help desk agent with the right skills. MMR integrated the contact center with a third-party application that records all calls for training and quality assurance.

- **Digital signage for organizational communications:** To communicate university news in an attention-getting format, MMR deployed approximately 100 Cisco Digital Media Players that power Cisco Professional Series LCD Displays throughout the university. Content is scheduled centrally. This is the largest Cisco Digital Signs deployment in the region.

Results

The advanced Cisco collaboration solution is helping University of Dammam support next-generation learning and research and increase administrative efficiency.

E-learning, Attracting New Generation of Students and Faculty

The university now offers online professional development for faculty and staff on topics such as effective organizational communications. Participants can join meetings from a Cisco TelePresence system in a conference room. During the session they can see and hear the trainer and view presentation materials that the trainer shares. Female faculty members and physicians, who work on separate campuses, no longer need to travel to the main campus for meetings. Instead, they can save driving time and costs by connecting with their colleagues from Cisco TelePresence Systems. People who miss a training session can click a link to play back the recording.

Faculty members have also begun using Cisco TelePresence Systems in classrooms to include students in other locations. These classes include female sections for medicine, computer science, dentistry, business management, and other fields of study.

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Enhanced Collaboration Across Campuses

Faculty and staff use Cisco TelePresence regularly for IT project management meetings, board meetings, and the university council meeting with the Ministry of Higher Education. "Previously, faculty and staff had to drive from other campuses to attend meetings on the main campus or at various ministries," says Dr. Alamri. "Now they can meet from their own office with an in-person experience, saving time for instruction and research."

Low Total Cost of Ownership

Hosting Cisco Unified Communications Manager and the Cisco collaboration applications on the Cisco Unified Computing System lowers total cost of ownership. "Hosting our Cisco collaboration applications on Cisco UCS blade servers lowers data center space, power, and cooling costs," EIShekeil says. "A single blade can support up to 10,000 users."

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— Salah Addin EIShekeil, Head of Network Department, University of Dammam

To simplify management, University of Dammam IT team uses the Cisco Prime Unified Communications Management Suite. "The management software provides detailed usage reports, helping us plan for growth," says EISheikel. "We also generate reports from Cisco Unified Contact Center Express to plan help desk staffing."

PRODUCT LIST

Unified Communications

- [Cisco Unified Communications Manager](#)
- [Cisco Unified IP Phones 9900, 8900, and 7900 Series](#)
- [Cisco Prime Unified Provisioning Manager](#)
- [Cisco Prime Unified Operations Manager](#)
- [Cisco Prime Unified Service Monitor](#)
- [Cisco Unified Service Statistics Manager](#)

Collaboration Applications

- [Cisco Unity Unified Messaging](#)
- [Cisco WebEx Meeting Center](#)

TelePresence

- [Cisco TelePresence System Integrator C Series](#)
- [Cisco TelePresence EX Series](#)
- [Cisco TelePresence Profile 65-Inch](#)
- [Cisco Jabber for TelePresence](#)

Customer Collaboration

- [Cisco Unified Contact Center Express](#)

Data Center

- [Cisco Unified Computing System with Cisco UCS B200 M2 Blade Servers](#)
- [Cisco Nexus® Switches 7000 and 5000](#)

Another source of cost savings is the elimination of servers on each campus for communications and collaboration applications. Remote campuses receive services over the network, so they only need a Cisco Integrated Services Router and endpoints such as Cisco Unified IP Phones and Cisco TelePresence Systems.

Next Steps

The university is extending Cisco Unified Communications to King Fahd University Hospital. To discuss patient cases and share medical images with colleagues in other locations, physicians will use the Cisco Jabber Video™ for TelePresence software or the Cisco WebEx® cloud service. “We cannot predict how rapidly web conferencing will grow, and using the Cisco WebEx cloud service lets us pay by the user instead of investing in equipment,” says Dr. Alamri.

The university continues to add new capabilities by integrating the Cisco applications with other applications and databases. For example, when help desk agents receive a call, they will also receive a screen pop with information from a database about the caller's endpoint, such as the device type and IP address.

“Obtaining this information without having to drive to campus will help us provide better service,” Dr. Alamri says. In addition, a developer is integrating Cisco Unified Communications Manager with Cisco Digital Signs and the university website so that faculty and staff can simply press a button on their phones to view information about campus events.

University of Dammam also plans to extend its e-learning program to more students in more locations. Students will join the classroom using Cisco WebEx or Cisco Jabber for TelePresence client, which can be downloaded free of charge.

Technical Implementation

The Cisco Unified Computing System in the data center is configured with 16 Cisco UCS B200 M2 Blade Servers. Thirteen of the blades host Cisco Unified Communications Manager and the Cisco collaboration applications, and the other three blades host the billing system, Nevotek IPT Office, the third-party recording system and fax-to-email solution, and other university applications.

Although a single blade server can support up to 10,000 Cisco Unified Communications users, the university operates Cisco Unified Communications Manager on two servers, for resiliency.

For More Information

To learn more about Cisco Collaboration, visit: <http://www.cisco.com/go/collaboration>.

To find out more about Cisco TelePresence, visit: <http://www.cisco.com/go/telepresence>.

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




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