

Des Moines Area Community College stretches learning options, budget with HP



"Only HP offered a complete mobility solution. They've helped us do more than we ever thought possible with our limited budget."

– Greg Martin, chief information officer and vice president of Information Solutions, Des Moines Area Community College

Students at Des Moines Area Community College in Iowa are part of a fast-paced world that often takes modern technology for granted. They expect lots of educational options and flexibility. Rigid class schedules and conventional teaching techniques just don't cut it for many of them.

DMACC caters to student curriculum choices with up to 75 programs, ranging from traditional studies like literature and health care to high-tech subjects like telecommunications, networking and Internet technologies.

As for flexibility, DMACC is on the leading edge. Example: The Synerg.e™ Center at DMACC's West Campus, where tomorrow's innovators go to learn and collaborate.

Serving 500 students in high-tech subjects, the Synerg.e Center is networked wall-to-wall to support a variety of technology solutions. Students work on HP iPAQ Pocket PCs. Professors work on Compaq Evo PCs. The entire West Campus is powered by inexhaustible HP ProLiant servers.

For Synerg.e Center students, class is never really dismissed, thanks to 24 x 7 wireless access. Textbooks, class materials, lectures, even exams are available online. And with email and Web forums, classroom attendance can happen when and where the student wishes.

DMACC
DES MOINES AREA
COMMUNITY COLLEGE

Tony Paustian, executive dean of the West Campus and the Synerg.e Center, believes the new technology is responsible for a 95 percent increase in the number of billable course credits at that campus. At the same time, Mark Clark, director of Networking for DMACC, says the West Campus IT system is so efficient that a single staff member can successfully manage it.

For these reasons, DMACC decided to expand the technology initiative – including wireless mobility – to the college's other five campuses at Ankeny, Boone, Carroll, Newton and Urban/Des Moines.

Integrating and mobilizing all six campuses

Working with a limited budget, DMACC knew it would take creativity to build a solid infrastructure and add the mobility features that would attract students to the outlying campuses and keep them connected.

Connectivity is important to DMACC because of its geographic layout, with six campuses spread over 11 percent of the state of Iowa. Having students from one campus drive to another campus for part of their course work isn't a practical option, and some courses were not available on all campuses because of staffing limitations.

"The campuses were also technologically separated, with five different operating systems, no desktop standard, no shared storage and a slow recovery process," notes Greg Martin, chief information officer and vice president of Information System Solutions. "With a small staff, there was a limited amount of expertise per system, and stability was an everyday issue."

DMACC's technology vision included wireless mobility for all campuses, but first it had to create an infrastructure that would integrate all six campuses.



Finding the right partner

DMACC needed the right partner, one with world-class solutions, services and products that could cover the campus from end to end, and then provide the vision and expertise to take it on to wireless. "HP was the only company that stepped forward with a total solution and the support the college needed," remembers Paustian.

Today, the West Campus is still the proving ground for new technologies, but all six campuses are now standardized on HP Compaq desktop PCs on a Windows 2000 platform with Active Directory. A StorageWorks Enterprise Modular Array at the Ankeny campus provides reliable storage, backup and recovery for all campuses, using Veritas software for storage management.

Each of the other four campuses has its own mini data center with an HP ProLiant ML370 server as its domain controller and an HP ProLiant ML330 as a file server. "We chose HP ProLiant servers because they simply provided the best return on our investment," says Clark. The mini data centers communicate with each other through Domain Directory Synchronization on T1 and dual T1 lines, with Ankeny as the hub.

DMACC's Greg Martin, chief information officer and vice president of Information Solutions, considers HP a staunch ally in achieving the right solution. "I meet regularly with our HP account representative and several HP people to

discuss the technology budget and the projects we want to accomplish over the next six to 12 months. It's collaboration with HP that helps guide us to the best solutions, including the best PCs for our needs.

"Because we've had such positive experiences with the d510 PC since 2002, choosing the new HP Compaq d530 model was easy," says Martin. "Because HP makes it affordable, we can do PC refreshes more frequently and keep our users productive. We're using all three form factors, and, on HP's recommendation, we're using Altiris software to install and manage desktops and servers throughout the college."

Meanwhile, the college is testing wireless mobility at its Ankeny, Boone, Carroll, Newton and Urban/Des Moines campuses. Students in four classes use HP iPAQ Pocket PCs to read electronic textbooks, create presentations, do research and download specialized software from the college's Web site. Technology students use their iPAQ handhelds to test equipment they are learning to maintain and repair. And everything from the Web is delivered through a mobile Web portal that formats course materials to fit the HP iPAQ Pocket PC screen.

In the fall of 2003, DMACC will expand the mobility initiative to eight classes, and, by the spring of 2004, the school hopes that one-third to one-half of all classes will offer the same mobility.

Challenge

- To efficiently deliver a wide variety of educational programs to busy students on their own terms, including 24 x 7 access to course materials, while staying within DMACC's IT budget

Solution

- HP iPAQ Pocket PCs accessing a collegewide infrastructure powered by HP ProLiant servers and backed up by an HP StorageWorks EMA12000

Results

- Increased staff productivity
- Enhanced campus connectivity
- Improved system reliability
- Expanded student options
- Reduced textbook costs
- Increased enrollment
- Reinforced DMACC's image as technology leader

Hardware

- HP iPAQ Pocket PCs
- HP Compaq Business Desktop d530 PCs (all 3 form factors)
- HP ProLiant ML370 and ML330 servers
- Compaq Evo Desktop d510 PC
- Compaq Evo and Armada notebook PCs
- StorageWorks Enterprise Modular Array
- HP ProLiant ML370 and ML330 servers
- HP laser printers

Software

- Windows 2000
- Veritas Net Backup
- Altiris Deployment Solution

Through a special college partnership with McGraw-Hill, students get e-textbooks free of charge as part of the beta program. These texts can reside on an iPAQ Pocket PC or on SD cards. If they prefer, students can also view their texts on the larger monitors of HP Compaq d530 desktop PCs equipped with SD card readers. Students can also check out card readers and read their textbooks on their home PCs.

A win-win-win scenario

As the new solutions were deployed, it became evident that everyone was going to benefit from the improvements – faculty, staff and, most important, students.

An example of HP Adaptive Enterprise strategy, the new HP ProLiant-based infrastructure is streamlined and simple to maintain, and the Altiris Deployment Solution has drastically reduced the time required to install new desktop PCs. "In a lab of 30 computers it used to take a LAN administrator or lab person about two full days to install the image," Clark states. "With Altiris, it takes us 45 minutes tops for all 30 machines, and that includes loading Microsoft Windows 2000, Office XP, Acrobat Reader, Windows Media, service packs and more."

The new system is reliable and secure, protecting all campuses from costly downtime, and the new HP PC standard gives everyone reliable desktop PCs. The system backup window has been reduced from four days to about eight hours. In addition, faculty and staff can use the scheduling, communications and presentation capabilities of iPAQ Pocket PCs to gain productivity.

For DMACC students, the iPAQ Pocket PC is an affordable solution. And since e-books are 33 percent to 66 percent cheaper than standard bound textbooks, students can justify the hardware cost after four or five semesters, says Paustian.

"Students on all campuses like the iPAQ Pocket PC and are enthusiastically finding new ways to use them," says Paustian. Some students bought keyboards so they could write papers on their iPAQ Pocket PCs.

The allure of e-learning can be seen at the West Campus, where enrollment is soaring. "Many part-time students have become full-time students," says Paustian. "That's because wireless mobility makes it easier for them to juggle work, family responsibilities and education."

Meanwhile, DMACC is abuzz with ideas about how to use its new technology. These include expanding mobility for faculty and staff, increasing flexibility in the use of classrooms and improving campus maintenance operations. To accomplish these goals, DMACC will need to expand bandwidth and its Web portal. A more advanced recovery solution is also under consideration.

Why HP

The consolidation and mobility projects were two important steps in DMACC's efforts to use technology creatively. In 2002, InfoWorld named the system's West Campus to its prestigious list of most innovative technology users. The innovative wireless project that earned the DMACC West Campus recognition also launched the college's relationship with HP.



"HP has spent a great deal of time, effort, research and money to ensure that their mobility hardware works well with the other pieces of the solution," says Martin. "That's probably why we're seeing a grassroots adoption of this technology that extends beyond the uses planned for it."

From the beginning, Martin says, HP was the only company that offered a complete solution. "Choosing between a piecemeal approach and letting HP provide a complete integrated and streamlined solution was an easy decision."

They had the expertise we needed, and they understand higher education."

"HP provided competitive pricing for HP products and services," adds Clark. "They also helped us research different technologies, establish guidelines and find progressive pricing for third-party software."

HP then deployed the solution, including the main data center at Ankeny, the mini data centers at the other four campuses and PC migration at all locations. And HP didn't walk away after the hardware was installed. When situations develop that demand a quick response, DMACC calls an HP partner Vital Support Systems in Des Moines, and HP is still a valued source of information.

"We call HP regularly to get feedback on new ideas and new technology," says Martin. "We have a close, strong relationship. I expect it to last for many years."



Paustian particularly appreciates HP's leadership role in promoting the use of mobile technology to improve education. "HP forums that focus on topics like the virtual classroom let educators discuss what's happening in the classroom today, how things are changing and what they can do with the new technology. To me, this demonstrates HP's commitment to helping educational institutions."

At a glance

Organization: Des Moines Area Community College

Founded: 1965

Location: Des Moines, Iowa

Students: 21,000

Telephone: 800-362-2127

URL: <http://www.dmacc.edu>

Partner at a glance

Organization: Vital Support Systems

Headquarters: Des Moines, Iowa

Telephone: 515-334-5700

URL: www.vitalsite.com

Primary business: Technology integrator and consultant

For more information on how working with HP can benefit you, contact your local HP service representative, or visit us through the Internet at our world wide web address: <http://www.hp.com>

© Copyright 2003 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice.

5982-1396EN, 09/2003

