

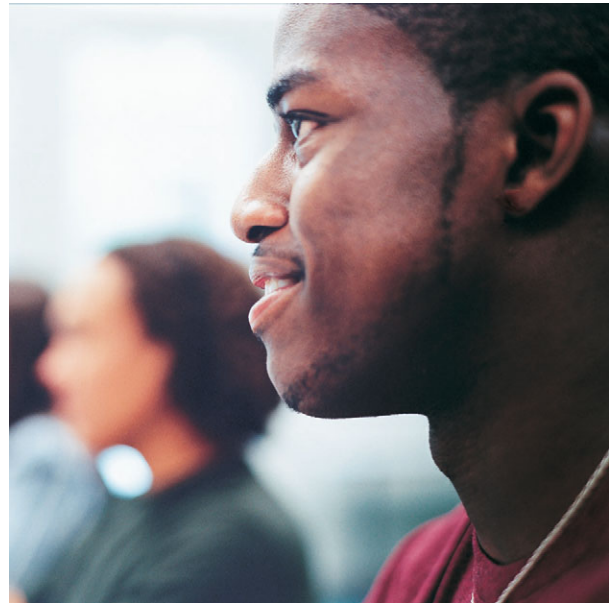
HP helps Bucks County Community College
painlessly migrate Datatel applications from
Tru64 UNIX® to HP-UX 11i

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– Deborah Noble

Director of Information Network Services
Bucks County Community College



Solutions for the adaptive enterprise.



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In 1964, Bucks County Community College (BCCC) was founded in response to a need for a public two-year collegiate institution to serve graduates of the County's high schools and other citizens who would benefit from an experience in higher education. Today, it offers more than 85 programs of study to nearly 10,000 students at nine locations throughout the county. In addition, each year nearly 20,000 people take advantage of the College's noncredit continuing education courses for career advancement or personal enrichment.

In 1994, to efficiently support faculty, staff and students, the College implemented an integrated information management solution for higher education – Datatel's Colleague® Enterprise Resource Planning (ERP) application. Colleague's foundation embraces sophisticated workflow tools and ease-of-use features, limiting the maintenance required to keep the system operational. To manage campaign goals and donor information, Bucks CCC also deployed Datatel's Benefactor™ solution.

An evolutionary environment

At its outset, the ERP solution was hosted on a Digital Equipment VAX 7710 server, but gradually, as the Datatel installed-base using this equipment dwindled, the College was forced to prepare for a move to a new platform. Towards the end of 1998, Bucks CCC became one of the last Datatel customers to migrate from the VAX, and the ten-month transition left a lasting impression upon the College's Information Network Services' (INS) staff.

Deborah Noble, Director of INS for Bucks CCC, recalled, “In retrospect, being one of the last customers to make the transition was probably a mistake – support expertise had been shrinking and was hard to find because it was clearly a minority platform.”

The College re-hosted its Datatel applications – with 80 concurrent terminal-based users – onto a Compaq AlphaServer 4100 running Tru64 UNIX, and experienced a good performance boost.

In 1999, Bucks CCC installed Datatel's WebAdvisor, to enable web-access and self-service functionality to Colleague for students and faculty. WebAdvisor provides standard online transactions, such as registration, faculty grading, payment, transcript, course schedule, degree audit, course availability and other features.

Scaling with increasing online demand

Noble reflected, “Over time, the total number of concurrent users rose to 120 performing transactional processing from terminals, but the web activity increased to hundreds and then thousands of online requests to access transcripts, perform registration and look up online information. The popularity of the web-interface was very evident, and with its growth came increasing demands on server resources.”

The College's community steadily demanded higher levels of online access. Steady increases in enrollment generated additional demands for online information. By 2002, the demands on the system were too much, resulting in rapidly lengthening response times. Noble noted, “It could take three or four minutes for registration screens to update! We were struggling with some huge performance issues and very concerned about the system's ability to cope with the next year's registration demands.

“We did consider upgrading the server to continue on Tru64 UNIX until Datatel's end of support for this operating system; however, we didn't want to experience being at the trailing-end of another platform migration, so we decided it was time to make the jump to a new environment.”

Moving from Tru64 UNIX to HP-UX 11i

Doug Burak, Systems Manager of INS for Bucks CCC, described, “There were three UNIX-based platforms to choose from for the Datatel applications – HP, IBM and SUN.

“We already had HP ProLiant servers in our infrastructure supporting file and print sharing. We liked the field service from HP, the fast response to problems, and we have always had a good working relationship with HP. The decision to partner with HP for this project was easy.”

In addition to the Datatel application server, Bucks CCC had six more legacy AlphaServers hosting e-mail, web services and student systems. Burak explained, “While the Datatel server environment remained our focus, we knew it would be operationally efficient to make a larger move from all of the Tru64 UNIX servers to HP-UX 11i.”

“HP did a great job. The servers were configured to our exact specifications before they arrived on-site. An HP field engineer was only with us for one day to install all seven servers.”
– Doug Burak, Systems Manager of INS, Bucks CCC

HP worked closely with the College to understand its needs for performance, scalability, budget requirements and upcoming registration deadlines. The final configuration comprised an HP rack-mounted rp5405 server – with two PA-8700 processors, eight gigabytes of RAM, HP-UX 11i v1, and four 73 gigabyte drives – to host Datatel’s Colleague and Benefactor solutions, and five HP Integrity rx2600 servers – with Intel® Itanium® 2 processors – for the remaining applications. One HP server rp2405 is being used as a test environment and doubles as a fail-over/disaster recovery server for the rp5405. HP Serviceguard software handles the automatic transfer of responsibilities between the servers. The solution included an HP StorageWorks Tape Storage Library 2 SDLT and HP OpenView Data Protector software for automated tape back-up.

The power of planning

To make the server deployment as efficient as possible, HP pre-staged the servers prior to delivery – installing software and configuring the disks for mirroring. Burak noted, “HP did a great job. The servers were configured to our exact specifications before they arrived on-site. An HP field engineer was only with us for one day to install all seven servers.”

Noble said, “We had the expertise to handle the migration steps in-house, and my team developed a migration and testing plan, and scheduled an hour of consulting time with Datatel’s Professional Services Team to validate the data transition and process steps.”

On the cutover date, December 19, 2003, INS staff backed-up the Datatel application programs and data, and restored them onto the new HP server. Next, Datatel-supplied utilities were run to convert the files to the new

operating system platform. Additionally, in-house Cobol applications were recompiled using the MicroFocus Cobol environment on HP-UX 11i. The system was down for approximately eight hours to perform the migration.

Burak commented, “We had been running in C2 security mode on Tru64 UNIX and we wanted to operate in a similar trusted environment on HP-UX 11i. To accomplish this transition swiftly, we opted to have employees refresh their passwords, and we took the opportunity to teach our system operators how to manage user accounts with the HP-UX 11i SAM utility.”

Noble added, “We had 35,000 separate logons for the WebAdvisor online access and we were able to bring the registry from Colleague on Tru64 UNIX over to HP-UX 11i and retain the user names and passwords. We were in the middle of a registration cycle so it was a huge relief not to have to alter these.”

On reflection Burak said, “One of the elements that made this migration go so smoothly was our decision to utilize the HP OpenView Data Protector software. We had an older tape repository system on our Tru64 UNIX server and our new tape library could not directly read the older tapes, but HP OpenView Data Protector was able to facilitate the complete application and data load.”

Delivering an adaptable enterprise

The new server environment was installed in time for the Spring 2004 walk-in registration period, and within the College’s budget.

Noble enthused, “The migration from Tru64 UNIX to HP-UX 11i turned out to be one of the smoothest transitions we’ve ever undertaken and only took about six weeks. The most amazing part was the users’ reactions – they were so excited and impressed with the speed and performance. Many commented that the new system ‘screamed’ and the response time was beyond expectations. It was an immediate and dramatic improvement with excellent performance throughout the entire walk-in student registration period, which also coincided with heavy year-end payroll processing.”

Burak added, “The performance is outstanding. For example, the back-up of the Tru64 UNIX Datatel system used to take three hours and when it moved to the HP-UX 11i and HP Openview Data protector software, our back-up only took one hour. The new environment will scale to meet our growing needs and has an excellent roadmap to future, even higher performing, chip-sets.”

With regard to the complete project Burak observed, “This migration turned out not to need any intensive handholding. I believe this was due in part to HP’s hard work at the outset to understand our needs and put a solution together that would make the transition as painless as possible. HP and Datatel had strong teams and provided excellent support.”

At a glance

- **Organization:** Bucks County Community College
- **Location:** Newtown, Pennsylvania
- **Founded:** 1964
- **Size:** 10,000 students
- **Telephone:** 215-968-8000
- **URL:** www.bucks.edu
- **Primary focus:** Bucks County Community College is a public, two-year college committed to serving the region by providing top-notch, affordable higher education. It offers a wide selection of courses which transfer to a four-year college for a bachelor's degree; includes programs in technical and occupational fields; cultural, and social, intellectual, and recreational studies.

At a glance

- **Partner:** Datatel, Inc.
- **Headquarters:** Fairfax, Virginia
- **Founded:** 1968
- **Telephone:** 703-968-9000
- **URL:** www.datatel.com
- **Primary products:** Comprehensive higher education solutions offering both integrated software and professional services.

Challenges

- Scaling to meet increasing web-based information access demands.
- Migrating to an adaptable infrastructure.
- Meeting performance expectations for registration period.
- Continuing to provide services during transition from aging legacy system.

Solution

- Migrate applications from Tru64 UNIX to HP-UX 11i.
- Install HP rack-mounted rp5405 server with four 73GB drives to host Datatel applications.
- Deploy five HP Integrity rx2600 servers for handling e-mail, web services and student systems.
- HP StorageWorks Tape Storage Library 2 SDLT for offline storage.
- HP OpenView Data Protector software for automated tape back-up.

Results

- A painless migration to HP-UX 11i.
- Able to meet peak 2004 registration period system load.
- Deployed within budget.
- Delivering infrastructure agility.
- Improved levels of service and accessibility for online users.

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