



University of Arizona

» Sophisticated job scheduling supports aggressive enterprise systems replacement project and dramatically reduces staffing requirements

BEFORE

- » Inefficient, manual processes hampered productivity and consumed valuable staff time
- » Scheduling handled within each application, limiting visibility into overall environment
- » Limited experience with distributed systems slowed enterprise scheduling deployment
- » Limited notifications available when issues threatened to delay batch processes
- » Complex batch processes were difficult for operations staff to monitor and manage

AFTER

- » 10 staff members retired yet only 2 had to be replaced in part due to greater efficiency and automation delivered by BMC Control-M
- » Single pane of glass provides cross-platform visibility into scheduling and workload needs
- » Skills/expertise from BMC Premier Partner ensured high maturity level from the outset
- » Integration with service desk speeds notifications for faster response to issues
- » Streamlined processes are easier to manage, easing the burden on operations



GEOGRAPHY

United States

INDUSTRY

Education

SOLUTIONS

BMC Control-M

BMC Remedy Service Desk

The need for sophisticated technology in education is just as great as it is in the private sector. State-of-the-art systems enable colleges and universities to enroll students, promote communication and collaboration, conduct research, pay employees, and manage finances efficiently and cost effectively.

However, limited education budgets often translate into outdated information systems. The University of Arizona (the UA) faced this situation in 2007. Many of UA's computing systems were nearly 30 years old. Administrators could no longer keep pace with escalating needs for business intelligence, research tracking, and reliable human resources (HR), payroll, finances, research, and student records administration.

Senior executives assessed the situation and identified compelling business reasons for replacing the outdated administrative systems. In response to their findings, UA launched Mosaic, a campus-wide Enterprise Systems Replacement Project that involves implementing new systems for student administration, financials, HR, payroll, and research administration, as well as a business intelligence solution to expand the availability of information to managers and executives.

Mosaic is the largest IT project ever undertaken by UA. The project goal, as stated in the university's 2008 Enterprise Systems Replacement Proposal, is to "provide a fundamentally sound and flexible administrative infrastructure with minimum risk, at a reasonable cost, and a positioning to provide the information wanted and needed to effectively guide and operate the institution."

The university has made significant progress toward this major IT transformation. HR and student administration systems are in place, the staff has achieved major milestones in the data warehouse implementation, and work on the financial system has begun. The project is already delivering important benefits. The new systems have enhanced UA's ability to prepare for and pass audits, streamlined operations and reduced costs, and provided better access to information.

"Early on, we could have made the decision to have the teams for each major system manage integration points and job automation independently," said Derek Masseth, the university's senior director of infrastructure services. "But we knew that looking at each system myopically would be a mistake. The systems need to interface with each other and share information. So we wanted to address job automation through a single pane of glass that would allow us to manage all the systems as a whole."

BMC Control-M is enabling UA to address this need through a single point of control. That single view across all of the Mosaic pillars is enabling UA to leverage a common skill set and common processes throughout the environment. With Control-M, they can manage the complexities of the various interfaces and run all the batch processes that need to occur to keep systems fresh and get data where it needs to be.

EXPERT ASSISTANCE SPEEDS DEPLOYMENT

Initially, UA intended to implement BMC Control-M using internal resources. "We had been a mainframe shop and we were moving to a distributed environment," said Kim Mayfield, manager of production services. "We were trying to figure out how to run jobs across distributed systems plus cope with learning the new systems at the same time. We realized we could benefit from bringing in outside resources with experience in workload automation."

The university partnered with CFS Consulting, a BMC Premier Partner with in-depth knowledge of best practices and strong implementation skills. With help from CFS, IT was able to keep the project moving smoothly while ensuring the transfer of knowledge and skills to UA's scheduling team.

"CFS helped in many ways," Mayfield recalled. "For example, when the business intelligence team implemented the data warehouse, there were more than 900 jobs associated with it. CFS helped us consolidate many of those jobs, making them more efficient and reducing the number to about 40. The smaller job streams are easier for the operations staff to manage."

"The biggest advantage of Control-M for us is the ability to look at our entire environment through a single pane of glass and to see all the successes and threats out there. Automation and integration with BMC Remedy are also important. Automation lets us get the job done despite condensed staffing. Everyone is using the same tool, so training is easier. Those factors have contributed to dramatic efficiency gains across IT, and we see vast potential for more gains in the future."

DEREK MASSETH
SENIOR DIRECTOR OF INFRASTRUCTURE SERVICES

Input from CFS was vital in helping to identify roles and responsibilities and set expectations across different groups. Masseth is convinced that assistance from CFS sped implementation of BMC Control-M in support of Mosaic. "With a project this size, there are always growing pains that you need to experience," he said. "CFS helped us gain that experience at a faster pace. We wouldn't be at the maturity level we're at with Control-M without the expertise of CFS. Eventually we would have reached this level of maturity, but it might have taken years."

QUANTIFIABLE COST SAVINGS

Control-M has delivered significant increases in productivity, enabling IT to support a growing number of batch jobs with a much smaller staff. Four members of the production services staff and six members of the operations center staff have retired, yet IT had to replace only two of the ten vacant positions. IT has now combined the production services staff with the operations center staff.

“We are a 24/7/365-day-a-year data center,” Mayfield said. “We are adding jobs to Control-M daily and reducing the number of jobs on our mainframe. Once all of the legacy systems are off the mainframe, we will be able to use Control-M to schedule all production jobs. This will save us the annual maintenance fees for the job scheduling tool we are replacing.”

TIME-BASED AND EVENT-DRIVEN PROCESSING

The staff currently uses BMC Control-M to handle more than 300 jobs for the Mosaic systems. Ultimately, the staff will expand the reach of the solution to include ancillary and external systems.

The majority of the jobs are date and time based. For example, jobs related to updating student data run nightly. BMC Control-M simplifies the creation of these jobs, monitors them to identify potential delays, and alerts the operations staff of any issues it detects.

Job schedulers have also set up several optional job streams, including certain backup and statistics collection tasks that run after critical batch processes are completed. If critical processes are delayed and there isn't enough time in the batch window to complete these optional jobs, a built-in bypass prevents the jobs from running. According to Mayfield, setting up these types of jobs was not possible prior to BMC Control-M, which made it easier to fit them into the nightly batch window by cutting processing time from approximately eight hours to four.

BMC Control-M is also making it easy to handle event-driven processes, such as financial jobs that are triggered when a particular file is delivered to the financial system via FTP. The solution's advanced file transfer capabilities simplify the management of these file transfers and ensure security. When the new financial system is in place, the number of jobs triggered by file transfers will increase significantly.

INTEGRATION WITH THE SERVICE DESK

A major advantage of BMC Control-M is its tight integration with BMC Remedy Service Desk, which UA uses to handle incident and problem management. Tight budgets mean smaller staff sizes, so there are fewer people monitoring systems at night. Remedy Service Desk automatically generates tickets when there are problems with batch processes, ensuring that operators are notified when something is wrong. As a result, the staff responds much more quickly when problems arise.

SIMPLICITY ENCOURAGES ADOPTION

To help ensure simplicity, the job scheduling staff has created a Web page with a service request form that captures all the information required to set up a new job. Developers provide information such as when

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KIM MAYFIELD
MANAGER OF PRODUCTION SERVICES

the job needs to run, the impact of holidays, FTP requirements, locations and emergency contact information. The schedulers use this information to create the job, typically filling the request the same day it is submitted.

This type of approach is helping to speed adoption. "People are pleased to see that things are automated and that they are getting reports that keep them up-to-date on what's happening with their jobs," Mayfield said.

CUSTOMER'S FINAL WORDS

"The biggest advantage of Control-M for us is the ability to look at our entire environment through a single pane of glass and to see all the successes and threats out there," Masseth concluded. "Automation and integration with Remedy are also important. Automation lets us get the job done despite condensed staffing. Everyone is using the same tool, so training is easier. Those factors have contributed to dramatic efficiency gains across IT, and we see vast potential for more gains in the future."

ABOUT UNIVERSITY OF ARIZONA

The University of Arizona is a premier, public research university. Established in 1885 as the first university in the state and the state's land grant university, the UA is building a better Arizona through access, quality and discovery. The UA serves more than 36,000 students and employs nearly 14,000 professional and medical staff. The National Science Foundation ranked the university 16th among all public universities.

BUSINESS RUNS ON I.T. I.T. RUNS ON BMC SOFTWARE.

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