PROMETHEAN WORLD: INTERACTIVE TECHNOLOGY FOR ENERGIZED LEARNING

IN MY OPINION
Jack Suess,
VP-IT & CIO,
University of Maryland,
Baltimore County

CIO INSIGHTS
James Webb,
CIO,
West Texas A&M University

Jim Marshall,
CEO
A Day in the Life of a 21st Century CIO
As IT professionals in higher education, we are finding ourselves inundated with requests for new and improved IT services to meet the needs of our campus community. Given the place of universities in our society, and especially public universities like California State University East Bay, we are also asked to provide affordable, accessible education to an increasingly diverse student population.

As a result, the CIO often hears the refrain, ‘We want more IT services and we want them now’. Oh, and did I mention that our budgets are not increasing? We need to meet these new requirements with the resources we already have. To make things even more interesting, our traditional population of full time students between ages 18 - 24 is being replaced by older, part-time students who are holding down full time jobs and raising families while going to school. And everyone has all kinds of different devices from desktops and laptops to tablets and smartphones, and they expect to access any campus service from any device at any time.

So where can a beleaguered CIO turn for help and respite? The cloud of course. At Cal State East Bay, our cloud infrastructure is hosted partly in our campus data center and partly at third party vendors, and to our community this is completely transparent. For IT, the cloud enables us to create capacity first, by adding resources locally, or by purchasing capacity from a third party vendor. Combine that with a fully virtualized environment, and we have a truly flexible solution that allows us to rapidly deploy IT resources where they are needed to quickly and nimbly respond to requests for new services.

Cal State East Bay: A 21st Century Campus Embracing the Cloud

By Borre Ulrichsen, CIO & Associate VP of IT Services, California State University-East Bay
BayCloud—Computer Labs for 21st Century Students

Student success means meeting students where they are at. That involves providing access to resources like computer labs with specialized software at any time, in any location, from any device. Twenty-first century students want an alternative to on-campus computer labs with limited hours and never enough computers when they need them. At Cal State East Bay, this has meant deploying VMware Horizon View on infrastructure provided by Nutanix. By running our virtualized environment on a hyper converged infrastructure (tightly integrated compute, storage, networking and virtualization resources delivered in a single hardware box), we have been able to provide a private cloud right here on campus at a price point we can afford.

This virtual desktop service provides student centric software applications which can be accessed anytime, anywhere, and on any device. Students can install a client program on their device, or they can use the HTML5 enabled browser to access a virtual desktop. For our students, the campus computer lab is now just one more app among many. BayCloud enables students to access software from anywhere—from any campus computer, their dorm rooms, home, or while travelling. An internet connection and acceptable browser or VMware view client program is all that is required.

For Fall 2015, our first term for this new cloud service, CSU East Bay supports 36 separate class sessions on BayCloud, providing simultaneous access to up to 200 students at the same time. Thanks to our flexible cloud infrastructure, we are ready to quickly scale to support expected increases in demand.

According to Dwight Dickerson, Director of CSU East Bay’s Paralegal Studies Program, “BayCloud will be a tremendous asset for the university’s online Paralegal Program.”

High Performance Computing in the Cloud—Research Infrastructure for 21st Century Faculty

An important part of teaching and learning at any university is providing hands on experience for faculty and students through research projects. Increasingly, these projects require high powered computing resources for relatively short periods of time. Examples at CSU East Bay include computational chemistry and applied data analytics for business. Once again our IT team has been able to create a private cloud based on VMWare and Cisco’s Unified Computing System (UCS). Working closely with faculty, we are able to free up resources from other systems when required to deliver short, intense bursts of computing power. Thanks to the cloud, a research environment that would previously take several months and large financial investments to set up, can be configured and made available in a few hours using existing data center resources.

In addition to our departments of chemistry and business administration, we are also providing these environments to computer science and engineering.

There is Still a Lot Left of the 21st Century—What is Next?

As good stewards of our campus resources, we are committed to maximizing the value of the investments we have already made in our on-premise infrastructure. On the other hand, the public cloud offers increasingly secure, reliable and available capacity at a decreasing cost. For Cal State East Bay, this means we will continue to invest in a hybrid infrastructure where we run virtual machines on-premise when it makes sense, but going forward more and more of them will probably run in the public cloud. The beauty of the way we have set up our environment is that nobody outside of IT will know or even care.