

## University of California, Berkeley

Published: May 2008



# FioranoMQ® Messaging Cuts Time Needed For Changes To UC Berkeley Student/Employee Online IDs By Over 90%

---

### Business Overview

Personal identity is a big deal at the University of California, Berkeley. Birthplace of the Free Speech Movement in the 1960's, UC Berkeley cherishes its reputation as a diverse and tolerant institution where ideas are shared and a person's individuality is celebrated.

Identities, as it turns out, are also critical to a subset of this sprawling school: UC Berkeley's Information Services and Technology (IST) division. The department, staffed by 400 technical and administrative staff, is responsible for maintaining the university's CalNet IDs—the database of security identities that allows students, employees and alumni to access various UC Berkeley services.

Administering the online identities of 35,000 students, 21,000 employees, and tens of thousands of alumni is no small task. Each CalNet ID gives its user secure Single Sign On (SSO) access to his or her portion of virtually hundreds of disparate computer systems and networks throughout the university. For faculty and staff, the CalNet ID is also their unique employment number used for paychecks, benefit statements and HR work records; for students it is their link to grades, housing and academic files. Finally, each CalNet ID provides a personal entry in the university's online white pages directory.

To handle this critical system, the IST division employs a Sun LDAP database, governed by Microsoft Active Directory. Kerberos protocols are used to provide authentication security. At one time, the complexity of syncing identity data with so many different networks made establishing a new ID number for an employee, student or alumnus a lengthy task. In fact, new hires typically received a temporary account number so they could function; several days later their "real" CalNet ID number would be ready. The IST staff realized a faster way was needed to make adds/changes/deletions to the CalNet ID system.

### Solution

Karl Grose, the programmer/analyst in charge of IST network security, said batch processing was causing latency issues. "We were using IBM Tivoli Director Integrator to synchronize information across all our applications and platforms. There was some support for standards-based messaging, but most of the data syncing was done in non-messaging mode. That meant syncing could take two to three days."

One of the connectors in the Tivoli system, as it turned out, was FioranoMQ. "We decided it was time to get our feet wet in messaging, so FioranoMQ was an obvious choice for us to look at," he noted.

FioranoMQ is the industry's most scalable, secure and fastest Java Messaging Server middleware. Its standards-based approach ensures real-time communication, connectivity and transformation of data across heterogeneous IT systems with minimal end-to-end latency, outperforming competitive products by orders of magnitude.

Grose said that his staff looked at several other products from leading competitors, but ultimately came back to FioranoMQ. “FioranoMQ had the performance we were looking for and it was a great value. By the end of our analysis, the choice was clear,” he noted.

Since IBM Tivoli Directory already supported FioranoMQ, it was easy for Grose’s team to set up Active Directory as the first messaging customer. “Once FioranoMQ was installed and tuned up, we found it to be rock solid. There were no odd errors or unexplained crashes,” he said.

Based on the team’s success with Active Directory, it soon established a second customer which enabled CalNet ID users to interface with the university’s central calendar. From the provost down to the administrative staff, FioranoMQ made it possible for users to schedule meetings, post events and more, all in real-time.

## **Results**

FioranoMQ continues to prove its worth by supporting an increasing number of connections. Jeff McCullough, the current principal programmer on CalNet ID, explained that Sun Identity Manager (SIM) now helps automate the provisioning and administration of IDs. “SIM lets people do things like make email address changes themselves,” he states. “FioranoMQ has eliminated the custom integration that would have been necessary to connect with SIM.”

With the strain on UC Berkeley’s CalNet ID system growing constantly—the university recently made the decision to add nearly a half-million alumni accounts—the IST team is moving to a High Availability (HA) Linux server system. Several instances of FioranoMQ are being added for the SAN-based file failover portion of the HA/Linux platform.

“Overall, there has never been a bottleneck handling the upstream information from HR or from the student and alumni systems. If for some reason things get backed up, we can cache messages on the client end to maintain smooth operation,” said McCullough. “These days, when a new employee is hired, we can establish the person’s CalNet ID pretty much that same morning, versus two to three days in years past. We expect our number of CalNet IDs to grow to nearly a million over time—and there’s no reason to believe FioranoMQ won’t handle our needs.”