THE PROJECT

Collaboration is the lifeblood of innovation and discovery, and cloud-based solutions have the potential to empower faculty, students, and administrators to enhance the research and teaching experience through decentralized initiatives that meet enterprise-level standards. In seeking the right Cloud Content Management solution to foster an environment of discovery and independent growth, these six universities partnered with Internet2 NET+ to leverage the collective innovation power of the research and education (R&E) community in sourcing, developing, and validating a cloud solution that works on their campuses and across the higher education community. As Morehouse CIO Clifford Leon Russell Jr. explains, “Morehouse is doing a cloud-first, mobile first approach to delivering modern technology to our students. They demand it and they deserve it.”

Research and education collaborators work on groundbreaking projects spread across departments, campuses, institutions, and even countries—so lasting solutions must be community-based. As University of Michigan CIO Laura Patterson puts it, “We are responsible to our institutions and we should be doing whatever we can to optimize for our institutions, but now we have to move beyond that and optimize for the industry.” In their search for a dependable, secure, and scalable file storage and sharing platform, these institutions collaborated to not only solve their own campus needs, but they also contributed to the future of the cloud in higher education through Internet2 NET+.

THE PROBLEM

Cloud services are quickly becoming a standard in cyberinfrastructure for organizations worldwide. Higher education institutions have long understood the operations efficiencies and improvements the cloud offers at scale—but they also face challenges to ensure their unique enterprise needs are met by providers in an exploding cloud service market. According to Kevin Morooney, Vice President for Information Technology at Pennsylvania State University, “20 years ago it was sufficient to say ‘we’re Penn State; we’re big; pay attention to us.’ That’s not the case anymore. Universities have to band together to present a better value proposition to the vendors so that we can more rapidly deploy services to our customers.”

The collaborators’ concerns fell into three main areas:

• **Enterprise-level control**: The University of Montana maintained an on-site block storage system that relied heavily on IT staff to configure. This drove users to individually adopt more agile cloud-based systems.
such as Dropbox that lacked the enterprise-level controls and HIPAA compliance required in a campus environment. "We don't always know what's going on, departmentally," says CIO Matt Riley, who cites providing secure, versatile, community-based services as a main driver of the University of Montana’s transition to the Cloud.

• Quantity and sensitivity of data: CalTech CIO Rich Fagen cites another common problem in higher education: the vast amounts of data used in scientific research: “We have high-end needs—people who have to move huge amounts of data from Pasadena, California to Switzerland, where they have the Large Hadron Collider.” Many file-hosting services just weren’t equal to the task.

THE SOLUTION

Since 2005, Box has been helping more than 10 million individuals, small businesses and Fortune 1000 companies easily access and share personal and institutional content with anyone, from anywhere. Box is a leading enterprise Cloud Content Management platform that embraces what’s best about the cloud, serving next-generation content storage and collaboration needs. Eighty-two percent of the Fortune 500 currently use Box.

Through the Internet2 NET+ initiative’s rigorous, peer-driven evaluation process, institutions collaborated with Box to create a specially tailored version of this valuable storage and collaboration service. NET+ Box is now accessible to the broader R&E community. Early adopters such as Carnegie Mellon University, Cornell University, Indiana University, Stanford University, University of California - Berkeley, University of Illinois, University of Michigan, and University of Notre Dame tested and validated the service based on the unique regulatory and security concerns of higher education before making it available to the broader community.

Additionally, Morehouse College discovered another cloud solution, SkySync, to seamlessly migrate its legacy on-premise storage to the Box cloud platform within minutes. They found the SkySync solution so beneficial that they proposed it for NET+ Service Validation—integrating several key customizations for research and education. SkySync is now available in the Early Adopter phase of the NET+ cloud services lifecycle and available for all of higher education to benefit from the ease of transitioning to Box’s cloud storage and collaboration platform. In fact, through the Internet2 NET+ initiative, nearly 100 institutions are working with cloud service providers to leverage collective needs and receive the benefit of customized, standards-based solutions for some of the market’s leading cloud solutions.

THE RESULT

Through their memberships in Internet2 NET+, the collaborators were able to deploy NET+ Box to securely and seamlessly meet the evolving file storage, collaboration, and sharing needs of multiple departments as well as off-campus partners.
NET+ delivered these key benefits:

- **Ease of roll-out:** Becoming a member of NET+ draws on collective experience in deploying cloud solutions in a higher education environment. “Our rollout has been a soft one and we have reached the point at which faculty are stopping members of the IT team on campus and asking how they can get access to Box,” says Philadelphia University CIO Jeffrey C. Cepull.

- **Responsiveness and collaboration:** According to Penn State’s Vice Provost for Information Technology, Kevin Morooney, “Through NET+, Box gets better at understanding what our campus requirements are in focused conversations. That enables me to more rapidly deploy services and applications that are relevant to our students and our faculty.” Rich Fagen, CIO at CalTech, adds: “Box has really taken off, and one of the reasons is collaboration with other institutions that are also using NET+ Box. You can share files seamlessly without giving somebody an additional log-in. That’s an example of where the network effect of Internet2 NET+ has really helped us.”

- **Acceptance by the Campus Community:** Since NET+ Box became available to University of Michigan students, faculty, and staff in spring 2012, about 50,000 users have adopted it. The University has also integrated Box into its Learning Management System, allowing users to activate Box with one click, and the faculty has requested even further integration.

- **Versatility:** The Penn State men’s volleyball team uses Box Notes to append observations from coaches to game and practice footage and allow players to register feedback from their wireless devices. “We’ll have them look at about 15 minutes of video on Box and have a discussion about where they are in their skill development and what they should be looking at next,” says head coach Mark Pavlik.

Beyond the adoption of a leading Cloud Content Management platform, collaborators cited the ongoing power of the higher education community to influence and inform cloud service vendors as the long-term result of their partnerships with Internet2 NET+. Penn State’s Vice Provost for Information Technology, Kevin Morooney, sums it up:

“NET+ is an example of what happens when we work together. When we band together, we can help demonstrate the needs of universities in a way that presents a value proposition for vendors. They’re now more oriented to my marketplace, and I can take advantage of that.”

(Reviewed July 16, 2015)