

Cloud Operations for Higher Education

A CloudOps Guide for Regulated Research,
Central IT, and Academics



Automate Cloud Operations Across Your Entire Campus

Kion provides a comprehensive platform to support your institution across Regulated Research, Central IT, and Academic departments to ensure secure, repeatable, and cost-effective cloud operations.

How Can Higher Education Benefit from the Cloud?

Universities have three technology-based focus areas: research, central IT and academics. Each department faces unique challenges — all of which can benefit from the cloud. Public cloud services can offer higher education institutions speed, cost-savings, and access to leading services and technologies.



RESEARCH

Research departments need to streamline access to great computing power and shared resources.

Researchers need to run large, demanding workloads in small bursts. As a result, university systems must build solutions — like HPC Clusters — to meet their computing needs. This can be a slow process as administrators need to navigate departmental bureaucracies and address concerns around who is going to pay for it, who is going to use it, and why existing solutions don't suffice.

Politics and pushback can make it challenging for researchers to get what they need in a timely manner. When this happens, researchers may resort to decentralized, external solutions. These shadow systems evade university security, governance, and procurement policies, placing the system and university at a greater security risk.

When proper access control is built into cloud provisioning, faculty and administrators bypass bureaucracies so they can access the resources they need without disruptions.



CENTRAL IT

Universities need to reduce the physical space and personnel requirements of managing their IT systems, while offering access to critical services.

Universities can expect to see exponential savings and benefits from moving to the cloud. Reducing reliance on on-site data centers frees up space and personnel resources for other IT needs.

Additionally, universities can take advantage of the managed cloud services to meet their unique needs. This could include leveraging managed service offerings, such as Amazon IVS to handle live stream needs or Elastic Beanstalk to address researchers' needs. Universities can efficiently equip their staff with a wide range of managed services without needing to rely on internal experts.

Higher education institutions can leverage the cloud to offer a broader range of services while saving physical space and personnel time for other projects.



ACADEMICS

Universities need increased access to expensive software and storage for students in remote, in-person, and hybrid study programs.

Universities have embraced eLearning initiatives that allow them to reach students anywhere. On-campus computer labs are a common solution, but they are only available to students that can be on campus. Scheduling limitations for physical space can create an additional barrier to access.

Students within technical disciplines — such as Physics, Data Sciences, and Computer Science — and creative disciplines — such as Journalism, Broadcast Reporting, and Graphic Design — require access to expensive software programs and have high computational and storage needs to manage large data sets and files. For some students, these needs may only be for a single semester.

Universities need a flexible solution that can accommodate large classes of virtual and in-person students for varying periods of time.

Cloud workspaces expand access to resources so that they are available anytime, anywhere, and for anyone. This can unlock new opportunities for universities to grow their in-person, online, and hybrid education programs.

Challenges of Cloud Adoption

Many tools and controls that offer confidence to university administrators are not built-in natively to the cloud provider offerings. Without staff that are specifically trained and experienced with the cloud, it can be daunting and difficult to achieve the full benefits of migrating to the cloud.



LACK OF EXPERTISE

Universities can face a gap in knowledge, creating a you-don't-know-what-you-don't-know syndrome. While many universities are equipped with IT departments that know of the cloud, many lack experts that can navigate the ins and outs of the system to get the most out of their cloud services and identify new solutions.



FEAR OF BLOWN BUDGETS

Cloud accounts act as a key to the world's largest data center. Handing over this key to a student can seem terrifying. In the process of learning, it's easy to make mistakes. The remembrance of past errors and anticipation of future errors can foster fear and apprehension toward migrating to the cloud.



LOSS OF CONTROL

Procurement and IT Security lose control in cloud environments. Procurement historically went through a specific process that cycles between: quotes, vendors, purchase orders, and approval of purchases. The cloud flips this process upside down, presenting an "open checkbook," where procurement is left to figure out who spent what and how to pay for the bills.

IT Security controls the data — what data is out there, who has access to it, and where everything lives on the network. Data leaks can be a common concern for IT when there are insufficient controls in cloud environments.

The best solution to address these challenges is to come up with a plan to find the right balance of control and usability. Universities can take advantage of the cloud without sacrificing important controls to prevent blown budgets and leaked data.

Benefits of the Cloud for Faculty, Staff, and Students



Availability of
services anytime,
anywhere



Access to
resources that
may not usually
be offered by
university IT
departments



Automation
and efficiency
to increase
staff bandwidth
and streamline
processes

Become Better by Default

Kion empowers organizations to mature their CloudOps practices, prevent common sources of chaos, and go faster with less risk, turning challenges into opportunities.

[Schedule a demo today](#) to see how Kion can revolutionize your CloudOps practice and drive growth and success.