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# Crash Course:
# The IT Automation Revolution to Radically Simplify Higher Ed IT Ops

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Higher Education institutions are faced with unique IT needs and unusually tough challenges. IT is in the crosshairs as technology is critical to the teaching, learning and administrative process. That is just to maintain the status quo. The bigger IT challenge is having the budget and the time to move learning forward by driving innovation such as:

- Personalized learning
- Blended learning
- Social media
- eLearning
- Big data and predictive analytics
- Other emerging new areas, including items being invented as we speak

Higher Ed IT today reports to two masters – the need to keep existing systems running and the intense desire to drive innovation. Unfortunately, there is only so much money to go around.

Forward-leaning schools need a new approach to learning to keep up with the times.This requires an equally new approach to IT. In short, you need IT automation that can dramatically save time, drive savings, and improve the end user experience.

## The Totally Unique World of Higher Ed

The Higher Education IT world is complex due to its dispersed campus environment; a constantly changing student body; a vast amount of BYOD and mobile devices; the need to interact with alumni and donors; tight, sometimes unpredictable funding models; a need to carefully protect intellectual property; a complex administrative structure; and the fast rising use of online/distance learning.

Managing all this complexity can take up all of IT's time and budget. The only way to manage the budget so money is available for innovative new tools is to be extremely efficient.

The only way IT has the time to think and act strategically is to be so efficient that hours spent on mundane admin tasks are kept to an absolute minimum. When you add in that devices are spread across campus and throughout dorms, the challenge to services these resources and maintain security becomes even more acute.

At the same time, there are similarities between K-12 and Higher Ed. According to The Center for Digital Education's 2015 Market Forecast, the demands on IT are growing. "K-12 and Higher Education are responding to similar market forces. The widespread use of mobile devices on campuses, the increase in digital content and the need for more personalized learning are changing how students learn and how classes at all levels are taught," the forecast said.

## Higher Ed IT Faces Intense Challenges

Higher Ed IT challenges are enormous and tough to master. New ones pop up every day. Here are some of the top issues institutions face today:

- Ever-changing student body (in terms of the people and the technologies they bring to campus).
- Ruthless financial pressures.
- Providing distance learning/online education that is integrated with existing curriculum systems.
- Support for students with both college-issued and BYOD devices, as well as faculty, administration, and researchers.

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- Campus networks are far from simple, with many interconnections and resources. These networks aren't just complex, the geographic distribution make them tough to manage.
- Securing access to data and systems with a network of users and devices that is widespread, mixed and ever changing
- Choosing the right innovative, game-changing technologies
- Shifting to Cloud/SaaS applications to give faculty, staff and students more flexibility (migration, network architecture and bandwidth – including LAN, WAN and wireless, management and security issues must be dealt with)
- On-boarding new students (this involves network access, user rights and authentication, and integration into administrative systems)

## Money vs. Innovation: Can You Do Both?

Higher Ed IT departments are always trying to do more with less. Fortunately there are some tricks to help make this happen.

**Tough Economic Environment:** The cost of higher education rose 250% in the last 30 years in the US. Family incomes only went up 16% in that same time. Cost savings is one way to control tuition costs. That has led to the IT mandate of harnessing technology to capture new, cost-effective and creative ways to educate.

Massive open online courses (MOOCS) are one approach. This requires intense technology to support scale, offer real-time feedback for students, and maintain constant connectivity.

An overburdened and under-budgeted IT staff is not in a position to support this kind of effort without radically simplifying their day-to-day maintenance, remediation, and monitoring processes.

A highly efficient operation, on the other hand, should have the time and budget to pursue innovation. And much of this efficiency comes from automation.

## The Stunning Economics of Higher Ed IT Automation

**The Problem:** Rare is the Higher Education institution that is not strapped for cash, and nowhere is this felt more than the IT department.

Higher Ed IT budgets were completely flat in 2014, and rose slightly in 2015, reports The Center for Digital Education.

"It is no surprise that a lot of educational institutions and school districts are getting caught up in the newest technology, but don't have the infrastructure to support it. Education IT leaders are looking for solutions and guidance about how others have solved their infrastructure issues to move teaching and learning into the digital world," said The Center for Digital Education in its annual Market Forecast.

One overriding issue is these colleges and Universities need to control, if not lower, costs. As tuitions rise, students look elsewhere for cheaper alternatives, including online schools. To stay competitive and attract students, schools must get their economics in order, and IT and IT automation can play a key role.

**The Answer:** IT can't very well expect major budget increases when other costs are rising, and the school is spending money on items that will attract new students. These budget pressures also mean not enough money for new machines, so institutions make do with outmoded devices that aren't secure. Windows XP, for example, no longer gets any security patches or updates, leaving the whole network vulnerable.

The solution is to do more with less. When IT saves money on its core services, it has budget for technology that will give the school an edge over its rivals, and offer educational benefits to students.

Automating core IT functions results in massive savings, especially when three-quarters of IT budgets go to just keeping existing operations running not on innovation.

# The Gartner Take on Higher Ed Innovation

Massive open online courses are just one area of innovation. Gartner has ten more areas Higher Education IT pros should consider.

Here are a few Gartner favorites:

**Adaptive Learning**
With adaptive learning, learning content is adjusted dynamically based on student preferences or responses.

**Predictive Analytics**
The proper use of analytics can help schools gain better student outcomes and increase student retention.

**CRM**
Customer relationship management (CRM) is being used by schools to improve relationships with students, prospects, alumni, donors and other partners.

**OER Ecosystem**
Open educational resource (OER) ecosystems are akin to open source software. The content is free and shareable, leading to lower costs.

**Collaboration Technology**
Collaboration technology is harnessed not just for communication, but also to help geographically dispersed people work closely together.

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**Faster Problem Resolution:** For instance, 40% of the time spent fixing a problem is spent isolating the issue and analyzing the root. Solutions from vendors like Kaseya can automatically detect issues, provide alerts and support very quick root-cause evaluations – even for complex cloud and virtualized network environments. Systems that automatically monitor network systems and devices arm you with all the operational data needed to solve an issue.

**Right-sized Software Licensing:** Software is one area of waste and inefficiency. IT often spends more on licenses than it needs to, overbuying licenses so it won't get caught short and not reassigning licenses when people leave. Even worse, by not knowing exactly what is installed, institutions may have to pay fines and buy new licenses when they flunk a software audit.

**Improved Security and Access:** Keeping all antivirus and anti-malware software up-to-date; timely and completely installing patches; and managing user passwords and privileges can be a Sisyphean task without automation.

**Real time status of Network and Devices:** Occasional snapshots of performance data aren't sufficient to be on top of usage patterns and trends. Continual automatic monitoring delivers rich data on performance trends and predictive peaks and valleys.

With IT automation, staff is more productive (and better able to absorb downsizing), can repair problems in a fraction of the time it took before, and perform most time-consuming maintenance tasks automatically.

## Kaseya Solutions

IT automation is arguably the answer to many Higher Ed IT problems. And there are solutions that have been created and priced for lean, budget-conscious IT organizations, like Higher Ed IT Ops groups.

Kaseya solutions can specifically help by drastically reducing the time and effort it takes to:

- Continually audit and update devices (laptops, servers, workstations, kiosks, etc.) to make sure they are running to Standard Operating Procedures (SOPs).
- Install patches – including on laptops that are off network – to ensure the latest versions are updated in a timely fashion.
- Remotely fix PC, server and network issues and quickly resolve trouble tickets, including automatic remediation of common problems.
- Manage the growing number of mobile devices.
- Build and run a Help Desk that works efficiently and can pre-emptively discover and remediate issues before they impact end users.
- Establish full password auditing and password automation, set user privileges based on role, and monitor for unusual user behavior.
- Handle backup and recovery easily and with the assurance that recent data is backed up and can be quickly restored.
- Produce real-time analytics and complete reports.

More importantly, all automation is based on change- and policy-management procedures that each IT group can define based on its own best practices and needs. And all managed through a single pane of glass.

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CASE STUDY IN BRIEF

# University of Kentucky

**The Problem:**

The University of Kentucky had IT problems typical of Higher Ed institutions. Much of the work was troubleshooting, fixing machines, and doing updates. And it relied on the good old-fashioned sneaker net.

Take the University's research department. Many locations are a 45 minute walk from IT. Once on the scene, it could take hours to solve the problem or do the updates. And for big patches, IT spreads out across campus, visiting machines to install the fix. "Our IT systems management strategy was pure sneaker net," said Steve Creager, technical support manager for Research Information Services at the University. "There was no way for our technicians to share information with each other or with users. There was no way to check in. Multiple technicians could have conducted the same maintenance task on the same computer. We would never know, and it was a mess."

**The Answer:**

The University replaced five point products it used for management with Kaseya VSA, which is a rich suite of solutions. This alone saved money. The management functionality available through Kaseya was eye popping. Not only did it enable the University to remotely access and control its distributed machines, but it also allowed it to automate many of the repetitive tasks that were taking so long. Things like issuing a patch, updating software versions or changing the network domain name on multiple computers could now be done automatically and in the background without disrupting users.

It was a game changer.

The Result:

- 80 percent of support calls are resolved remotely through Kaseya VSA rather than on site—up from 20 percent before the Kaseya deployment.
- Help desk technicians can easily handle increased ticket volume.
- Problem resolution went from taking more than a day to just minutes.
- A complete audit of IT equipment went from taking months to a few days.
- The efficient audit means hardware and software is no longer overprovisioned, saving on hardware and software license costs.

To learn more, check out the complete case study here.

## Summary and Next Steps

The problems for Higher Ed IT are many, but so many can be solved through IT automation. To learn more about the benefits of IT Automation, download our eBook "Automate Everything – The Time-Strapped IT Pro's Guide to Getting More Done."

And find out exactly what Kaseya IT Complete for Higher Education has to offer by clicking here.

**ABOUT KASEYA**

Kaseya® is the leading provider of complete IT management solutions for Managed Service Providers and small to midsized businesses. Kaseya allows organizations to efficiently manage and secure IT in order to drive IT service and business success. Offered as both an industry-leading cloud solution and on-premise software, Kaseya solutions empower businesses to command all of IT centrally, manage remote and distributed environments with ease, and automate across IT management functions. Kaseya solutions currently manage over 10 million endpoints worldwide and are in use by customers in a wide variety ofindustries, including retail, manufacturing, healthcare, education, government, media, technology, finance, and more. Kaseya, headquartered in Dublin, Ireland is privately held with a presence in over 20 countries. To learn more, please visit www.kaseya.com



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