



BYO – A new chapter in device management



Freedom, choice and flexibility are just a few things that students constantly demand. Be it curriculum, projects or schedules (and of course a few more things), they want the power to choose, they want convenience. The rise in the number of online universities, online courses and e-textbooks is a strong indication that students want the flexibility to study and work from anywhere, anytime. Brick and mortar educational institutions can also offer students similar flexibility, while reaping other benefits such as cost savings by replacing the outdated desktop model and introducing the virtual desktop experience thereby reducing maintenance and management overhead of lab infrastructure, streamlining support and retaining students.

Bring Your Own (BYO) is a phenomenon that enables this transition and is becoming popular not just in the corporate world but other areas such as health care, professional services and education due to the exceptional benefits it brings to the user and the organization. BYO simply means that students bring and use their own devices rather than relying on the ones provided by institutions in the computer lab therefore helping IT get out of managing lab devices. The cost savings will also enable institutions to re-allocate their limited budgets towards other services for students including research programs, scholarships and academic support. Let's take a deeper look into why the BYO program is becoming popular, how it fits within the existing priorities of both students and the institution, and how it can be implemented.

Embracing new school

Modernizing educational systems is a top priority for most institutions. A more traditional approach is to set up computer labs, which requires managing each device for updates, new applications, security measures and so forth. However, limited budgets and lack of IT resources can be a roadblock to setting up a full-fledged lab or upgrading an existing lab by replacing legacy devices that cannot run some of the more complex applications such as graphic intensive applications and engineering applications. A BYO program is the answer to these hurdles and is also the choice of students of Generation-Virtual (Gen-V) who prefer virtual and digital media channels to access information anytime, anywhere.

Embracing BYO can offer organizations the ability to simplify ownership, management and data security while saving costs and enhancing the student experience. Imagine an environment where IT didn't manage anything except the server farm. Imagine IT investing more time enabling new business initiatives and less time troubleshooting hundreds and thousands of devices. Planning for and managing complex applications and OSs on every device, limited mobility options and ad hoc data recovery mechanisms are becoming very old school. What if zero device management, centralized application management and enabling remote access were possible with just one solution? This is the paradigm shift a BYO program can bring to educational institutions.

The lab makeover

Managing physical computer labs is costly and a huge burden for the IT team. New and complex education applications such as AutoCAD®, Adobe® and engineering applications that sometimes need to be added or updated every semester require a robust device. IT has to continuously scrub and polish existing devices or get rid of legacy devices altogether and purchase new ones to support these requirements. On the other hand, students also demand

extended lab hours or 24-hour labs that can provide them the option to learn anytime. Setting up such new labs and maintaining 24-hour labs is often difficult, if not impossible, for institutions that are working on limited budgets. Educational institutions have, after all, other student development areas that they need to allocate budgets to, such as scholarships, academic support (libraries and research services) and auxiliary enterprises (dormitories, bookstore and meal services).

Desktop virtualization provides 24-hour access to the labs, while simplifying IT. Instead of providing physical computer labs that may not be open around the clock or have student-friendly or the latest devices, institutions can provide access to virtual labs on student-owned laptops, notebooks or other devices, such as the Apple® iPad™. In a virtualized environment, entire desktops and applications are delivered from the datacenter. Instead of installing software on a lab computer or student's personal device, the applications and the data reside in the datacenter and are accessed remotely. Applications run on the server and not a device, and can therefore be delivered to any type of device securely. This also means that IT can provision new labs instantly while reducing hardware expenses, capital infrastructure expenses (land and building) and energy consumption in the datacenter and cutting down on IT support needed to run physical labs. When introducing new applications, IT can test and develop them quickly while keeping other services running 24x7.

Citrix® XenDesktop® technology enables IT to quickly and easily institute a BYO infrastructure. XenDesktop also provides IT with the power to deliver custom desktops to users based on their needs with the kind of control and security policies suitable for IT. Hosted shared and hosted VDI desktops are good options for labs and student-owned computers while streamed desktops and hosted blade PCs are ideal for professors and IT staff who have a heavier computational requirement. Using these delivery models, IT can enable security policies that prohibit saving data on local devices. When virtualizing applications and streamed to endpoints as an on-demand service, Citrix® XenVault™ technology enables IT to automatically and transparently encrypt all data created through Citrix® XenApp™-delivered applications streamed to endpoint, even allowing IT to remotely wipe the data if the device is ever lost or stolen.

Student orientation

The success of any BYO program depends upon the extent of user adoption and satisfaction, therefore, a superior user experience is key. IT needs just the right strategic partner and an efficient virtualization solution to implement this program. Gen-V is experimenting with everything virtual including e-text books that are cheaper and explain complex concepts better with high quality images and charts. The rise in popularity of e-books is also acting as a key catalyst for increase in student-owned devices. Students are also eager to adopt the BYO program as it empowers them with a sense of ownership, flexibility and freedom. More and more students now own personal devices that range from the iPad and netbooks to Mac® laptops. They want university applications on these devices for convenience of managing personal and university data on a single device of their choice. However, students cannot be expected to purchase, install and manage expensive software; institutions must provide access to these applications using desktop virtualization. XenDesktop can deliver the same desktop experience that students are



familiar with including all of the applications a physical university lab offers, 24x7. The type of device and OS does not matter since XenDesktop works on any device, anywhere. Students have the flexibility to work from their dorm, a café, with a study group outside the campus, anywhere, on any device. With Citrix® HDX™ technology, students enjoy a rich, fast and high-definition experience even with the most complex or graphic-intensive applications such as AutoCAD®, Adobe and engineering applications, etc. This is also true for legacy machines that may not be able to run these applications effectively if installed locally. With XenDesktop, students connect to a virtual desktop and run these applications on any machine, therefore extending the life of their legacy machines or other personal devices.

Enrollment

Some institutions have experimented with launching mandatory BYO laptop programs, where students are required to own a personal laptops, tablets or notebooks. The advocates of the mandatory program claim that it fosters equality among students where all students have the same set of tools and resources to succeed. Other institutions are making the process elective by encouraging students to bring in their devices. The advent of new devices such as the iPad and other tablets has made the adoption easier and more affordable. Institutions can either offer subsidized devices to students, or provide devices after incorporating the subsidized cost of the device in the tuition fee. Some schools opt out of the mandatory programs since most students entering college already own a device and those who want to purchase a new device want the flexibility to choose rather than receive the one mandated by the institution. Almost all large institutions offer student discounts and this model works really well for students who are looking for the latest devices. Some schools also provide a stipend to the faculty to purchase a device of their choice to eliminate the need for classroom devices.

In schools where bringing a personal device to classrooms is not mandatory, some students may not want to own a device due to lack of funds or desire to own and manage a device. For such reasons, the institution may still have to manage computer labs. However, these labs do not have to use the dated desktop model, instead, they can centralize the delivery of virtual desktops to each lab computer. IT can manage and provision desktop images to thin clients or any other device thereby reducing individual software installation and maintenance efforts and extending the desktop refresh cycles.

Wrap up

A BYO program can help educational institutions embark on a strategic shift that lets them optimize budgets by saving costs and redirecting funds towards research, academics and other student services while keeping up with the virtual computing revolution and empowering students. Now more than ever, institutions need to reset priorities to gain maximum leverage out of the limited pool of funds. With Citrix as the business partner with a strong vision and solutions, BYO can bring benefits to the administration, students, teachers and IT, and start a new chapter in modernizing education.



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