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Apple in K-12 Education:
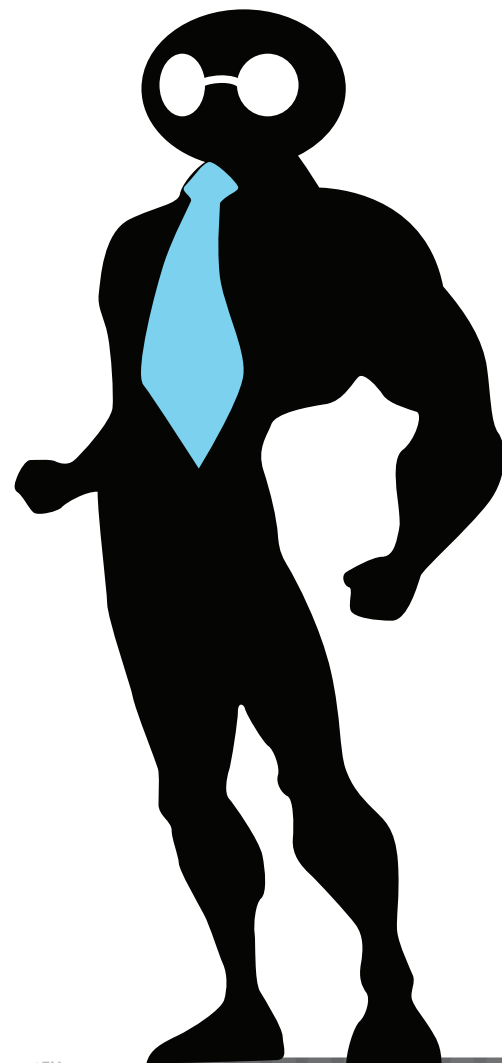### Challenges, Benefits, and Solutions

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INTRODUCTION

In an effort to better prepare students in grades K-12 for competition in the new global economy, many schools and educators are turning to technology. However, technology moves faster than most things and some K-12 institutions are still struggling to adapt to a more seamless cross-platform computing environment. Decades of dealing with Windows PCs and Mac clients on either a Windows server, a Mac server, or sometimes both have meant that K-12 IT staff have had to very carefully navigate all of the varying idiosyncrasies that come with cross-platform IT infrastructures. Now though, with more and more schools trading in textbooks for mobile devices (specifically iPads), enterprise-level solutions will need to be put in place on an enterprise-level scale to meet the changing needs of not just individual schools, but entire school districts.[1]

> *Decades of dealing with either a Windows or Mac server have forced K-12 IT staff to carefully navigate the varying idiosyncrasies of cross-platform infrastructures.*

In this white paper, GroupLogic, the leading provider of solutions for the cross-platform enterprise, will explore the challenges faced by K-12 institutions today, as well as some of the inherent benefits of those same issues. We will also uncover solutions that seamlessly meld cross-platform operating systems into individual networks with multiple servers. Then, we'll discuss how all of this is made possible in a K-12 institution without affecting the staff, the students, or the invaluable knowledge that schools create.

THE CHANGING LANDSCAPE OF APPLE IN K-12

In the past several years, a number of K-12 school districts have started to implement mobile devices such as iPod Touches, Kindles, and iPads into the everyday activities of their students. The hope is that the unique and evolving interactions students have with the technology will better engage them with the material and actually improve their learning. Additionally, many district officials are looking at the devices as means to cut down costs on things like paper, printing, and textbooks.

THE IPADIZATION OF K-12 EDUCATION

Recent iPad Deployments in K-12 Schools

Manatee County Schools - Florida
- Over 300 iPads used in science classes at six schools.[5]

MACCRAY and Little Falls School Districts - Minnesota
- Both districts will provide iPads for all middle and high school students in Fall 2011.[6]

Bancroft School - Massachusetts
- Students in grades 6-12 will be required to have an iPad by the 2012-13 school year. [7]

Auburn Schools - Maine
- iPad 2's will be given to 285 Kindergartners and dozens of teachers in Fall 2011.[8]

Burlington High School - Massachusetts
- iPads will be provided to every student through a 1:1 plan, implemented in September 2011.[9]

Chicago Public Schools, for instance, began using the iPad in over 20 schools in August of 2010 as part of a federal grant-funded pilot program. CPS Technology Director John Connolly has said that the district has seen gains of up to 60 percent in reading, math, and science scores since introducing the iPads. The program has received the attention of Apple CEO Steve Jobs, who pointed to CPS' use of his product in the announcement of the iPad 2.[2] Going forward, CPS hopes to expand the program into more schools, as well as to users in the district's central office.[3]

Other districts around the country have gone one step further than Chicago Public Schools. Privately-funded Webb Schools in Knoxville, Tennessee now requires every student to have an iPad. School officials believe the devices will actually save money in the long-term for students, who spend an average of $350 a year just for books. One iPad starts at $500, but digital textbooks for the device often cost at least 50% less than hard-bound versions.[4]

With iPads in schools, classrooms are no longer limited to the dated knowledge found within textbooks and school-approved videos. For many, there is a genuine belief that Apple products could potentially revolutionize the way teachers teach and children learn.

THE CHALLENGES OF CROSS-PLATFORM/ CROSS-DEVICE IT INFRASTRUCTURE

The most-used operating system found in schools continues to be Windows.[10] However, with the growing popularity and adoption of Apple products, the need the switch to a cross-platform software solution is becoming more urgent than ever. With more and more students, as well as faculty, using iPads, problems are bound to arise, particularly when it comes to printing, storing, and sharing documents. In a school environment, where these seemingly simple activities are happening countless times a day from so many individual users, IT staff are simply not capable of answering each support request on a case-by-case basis.

Many places of higher education have already made the switch to working in cross-platform infrastructures, seamlessly integrating Apple products with their Windows servers. K-12 schools actually share a number of similar traits with colleges and universities. Although there are not as many departmental issues, K-12 schools sometimes run into trouble between the grade levels. In the past, it was not uncommon to find a different server in every classroom. In recent years, however, many schools have worked to consolidate their servers through virtualization. This, however, is no small undertaking. Education IT departments can often resemble the infrastructure of a Fortune 500 company, while working with only a fraction of the budget.

Speaking on integrated operating systems, Appcelerator's VP of Marketing Scott Schwartzhoff told Information Week, "Platform players in this new (integrated) space will need an integrated strategy to create maximum value. This integration creates ease-of-deployment from a business standpoint, which in turn creates the opportunity for greater adoption. This ease of integration explains the enthusiasm we see from developers."[11]

A cloud-based server solution would address most, if not all, of the issues currently faced by K-12 IT staffs. Making the move to centralized data centers can provide significant cost savings on both hardware and IT staff. Implementing successful cross-platform software solutions in the cloud could help to save even more.

> *"A cloud-based server solution would address most, if not all, of the issues currently faced by K-12 IT staffs."*

How Apple is Revolutionizing **Education** — iPhone, iPod touch and iPad are transforming the way teachers teach and students learn.

Source: OnlineDegrees.org[12]

THE SOLUTION: APPLE AND WINDOWS, WORKING TOGETHER

In keeping with the IT upgrades happening at many large school districts across the nation, Cherry Creek School District in Colorado began a data consolidation project in 2010. After a successful trial period, the school purchased four licenses for a software solution that would allow devices to integrate with the Windows-based servers while keeping AFP (Apple Filing Protocol) intact. The solution was deployed district-wide within a few minutes in February 2011: all connectivity, shared access, and file corruption problems experienced by Mac users trying to access the district's servers were instantly resolved, and no longer pose a problem for the district's IT staff, teachers or students.[13]

Cross-platform computing environments inherently bring about unique challenges for their users. To overcome those challenges—as well as maximize the potential benefits—K-12 IT staffs must implement long-term, low-cost solutions that offer immediate integration and compatibility of multiple operating systems.

CONCLUSION:

The rise of mobile Apple products as the predominant teaching tool in K-12 education is not slowing down any time soon. As more educators discover the undeniable benefits of the iPad and similar products the adoption rate will only increase. As it does, so too, will the need for schools and school districts to implement enterprise-level cross-platform IT solutions. Seemingly simple tasks like wireless network printing, file sharing, and archiving will have to be addressed quickly and intelligently. Putting these changes in place across an entire school district will no doubt prove to be an incredibly daunting task. However, by not implementing a solid cross-platform solution, K-12 IT departments not only run the risk of creating more costs for themselves, but they also effectively place unnecessary roadblocks between students and the education opportunities afforded to them by technology.

ABOUT GROUPLOGIC

GroupLogic helps enterprise and education IT organizations simply and securely integrate diverse computing platforms into enterprise environments, connecting employees to enterprise files, content and assets to facilitate a more productive and efficient work environment. With more than two decades of experience, GroupLogic leads the marketplace in helping IT organizations effectively and easily manage the integration of Apple products into the enterprise ecosystem. Whether IT organizations are looking to integrate existing Apple assets, purchase additional Apple hardware like Macs and iPads, or want to take advantage of the hardware cost savings that accompany the adoption of IT consumerization, GroupLogic enables IT organizations to easily and securely manage the rapid integration of diverse platforms while ensuring resources are optimized. GroupLogic enables the enterprise to focus on what is really important - competitive differentiation, improved employee productivity, mitigated risk and reduced costs. GroupLogic's proven products- mobilEcho, ExtremeZ-IP, ArchiveConnect, and MassTransit-are in use by some of the world's most innovative companies, including Christie's, International Greetings and Omnicom Group.

For more information, visit our website – WWW.GROUPLOGIC.COM

1   http://www.convergemag.com/classtech/CPS-iPad-trial.html

2   http://www.nbcchicago.com/news/tech/117254428.html

3   http://www.govtech.com/education/iPads-In-The-Classroom.html

4   http://www.volunteertv.com/news/headlines/From_hard-back_to_electronic_iPads_required_at_Knoxville_private_school.
        html?ref=719%20AND%20http://www.wistv.com/Global/story.asp?S=13880126

5   http://www.bradenton.com/2010/10/20/2668152/tech-boost.html#ixzz1U7Ckp42f

6   http://goldenvalley.patch.com/articles/teachers-learn-ipad-in-the-classroom

7   http://www.necn.com/05/19/11/Worcester-school-encourages-students-to-/landing.html?blockID=525767&feedID=4213

8   http://www.sunjournal.com/city/story/1014429

9   http://burlington.patch.com/articles/high-school-to-implement-ipads

10   http://www.grouplogic.com/about/news/survey-mac-use-growing-on-campus.html

11   http://www.informationweek.com/news/development/mobility/231300139

12   http://www.onlinedegrees.org/research/apple-education/

13   http://www.grouplogic.com/resource-center/case-studies/Cherry_Creek_School_District_Case_Study_05192011.pdf