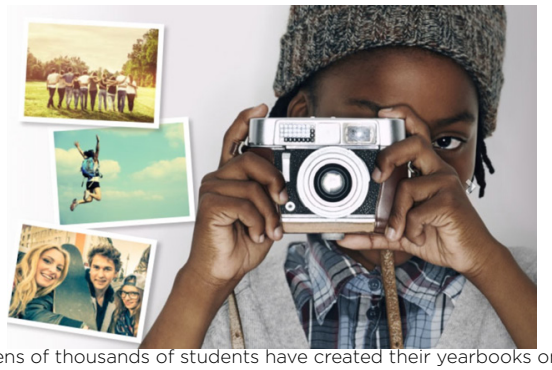
Reinventing how yearbooks are done in America

Jostens is a great example of how Nutanix can not only deliver apps from the cloud, but change an entire industry. As the country's leading manufacturer of high school yearbooks and custom class rings, Jostens has been a key part of the American high school experience for over a century. In that time, the process of creating yearbooks underwent several changes, and with the rollout of Monarch by Jostens in 2015 that process moved to the cloud. Today, tens of thousands of students across the US and Canada have created their yearbooks on Monarch, all powered by Nutanix.



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MORE THAN JUST CREATING YEARBOOKS

To understand what it means to do yearbook design in the cloud, we need to understand the overall significance of yearbook creation. Not only does Jostens provide a way for high school memories to be kept, but they also take part in the education of our country's budding authors, photographers, journalists, editors, graphic designers, and publishers. Creating a high school yearbook is as challenging of a project as the production of any magazine or book—and it is one of the few physical creations produced in high school that holds lifelong significance. Students also learn realistic goal-setting, group collaboration, and team building.

Typically, each high school has at least one journalism class or a yearbook club with a teacher and/or faculty sponsor. It's a tremendous collaborative project that runs the course of the entire school year. Of course, the methods of creating a yearbook have evolved over the years along with the publishing industry as a whole. And Jostens has always strived to help teach students by using the most modern methods available at the time so students would be well prepared for careers in publishing.

"The first big "thing" in yearbook publication was the invention of the digital camera 15 years ago. In my opinion this online partnership using a cloud server and an internet connection (Monarch) is the "next big thing."

– Denise Ferguson,
Alta High School, Utah

THE EVOLUTION OF YEARBOOK CREATION

Digital transformation was one of the most significant steps in the evolution of yearbook design. Over two decades ago, Jostens partnered with Adobe to bring the latest in digital content creation and publishing to the classroom. At the time, computer labs were becoming more common, and journalism classes were one of the heaviest users. Scanners and digital cameras were also key additions that would help to digitize the overall process.

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UNEXPECTED CHALLENGES

But with this digital transformation, came a whole new set of challenges. Schools now needed to manage their own computing infrastructure and software. Typically, the classes or clubs would need to rely on their school district's IT department to provide computers and the software necessary to layout their yearbook. This meant that IT had to support procuring and installing the latest versions of Adobe InDesign and Photoshop. They also had to manage Jostens' own software, called YearTech, that integrated with InDesign. On top of that, since yearbook design is such a collaborative process, it involved the management of hundreds of page designs and thousands of photographs. All of this data needed to be shared across the whole yearbook team. So it was up to school IT departments to setup and manage network file servers, control access, and ensure data would not get lost.

As this digital transformation progressed, Jostens and schools found that managing computers, software, access, and data became an ever increasing problem. School budgets were tight and computers and their operating systems aged. Adobe software versions became stale since schools couldn't afford to update each year. Jostens needed schools to update their YearTech software to stay compatible with the publishing systems in their manufacturing plants. But, since schools didn't always update their Adobe software, Jostens had to maintain YearTech compatibility with multiple Adobe software versions.

Managing computers, software, access, and data became an ever increasing problem for Jostens' support team

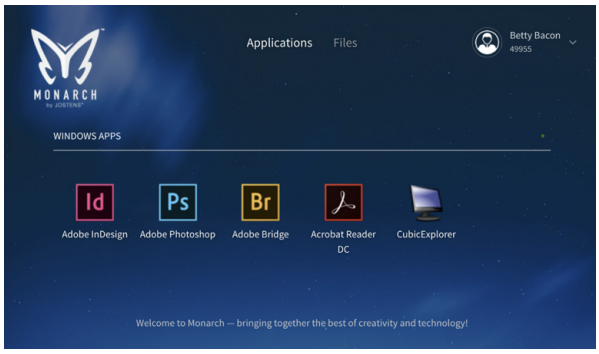
Complicating things even further, many schools were stuck on old hardware due to budget constraints. When they could buy new hardware, they sometimes chose Google Chromebooks, which can't run Adobe tools or YearTech at all. Worst of all, some schools failed to backup data and inevitably old hard drives on school file servers would fail, losing months and months of work. All of these challenges added up to an incredible amount of support that Jostens had to provide for its schools, just to keep everything working. Ultimately, all of these challenges constrained the growth of Jostens' premium yearbook design process.

SEARCHING FOR A BETTER WAY

One solution was to create an online yearbook creation tool, Page Designer, which Jostens rolled out as part of their Yearbook Avenue platform in 2003. This system allowed Jostens to control most aspects of the creation process since it was delivered as a web application. The new solution was used by many schools but didn't address the gap for advisers who wanted to teach real-world Adobe software. So in the fall of 2014, Betty Bacon, Jostens Director of Technology, set out to find a way to deliver Adobe tools with Jostens YearTech from the cloud.

ENTER XI FRAME

Since Nutanix built its platform specifically to deliver powerful Windows applications and workflows from the cloud to a browser, Jostens found it to be an ideal fit right from the start. Xi Frame Platform made it extremely easy to onboard Adobe InDesign and Photoshop along with Jostens YearTech software, so PoCs with a dozen schools were quickly up and running in the Spring of 2015. For these PoCs, Jostens created individual Xi Frame accounts for each school and relied on Xi Frame's built-in integrations with Dropbox and Google Drive for managing data.

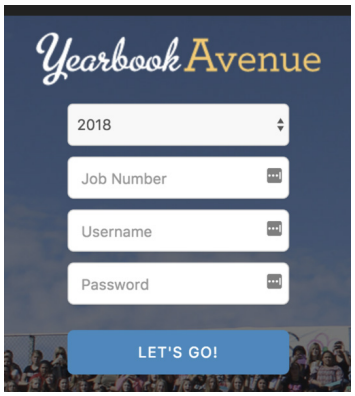


The Frame Launchpad runs in a browser and gives students access to the latest Adobe tools

For the 2015/2016 school year and beyond, however, Jostens looked to Nutanix to provide an even higher level of integration. Ultimately, the goal was to manage multiple schools from a small set of multi-tenant accounts covering various regions of the country. Also, the PoCs showed that schools wanted more from their data management solution than was available via standard cloud storage options. As a result, Nutanix worked with Jostens to create several key integrations to meet these goals, which ultimately came together for the launch of Monarch by Jostens for the 2015/2016 school year. Adobe also supported the program directly by applying its enterprise licensing model to the platform and by working closely with both Nutanix and Jostens at every step of the way.

AUTHENTICATION INTEGRATION

Jostens already had a web-based authentication system for managing schools and their respective student and faculty accounts. The authentication system uses a custom three-part approach that requires a unique school identifier plus a username and password for each user. Xi Frame's flexible authentication system was integrated so that users could login to Jostens' Yearbook Avenue website and be authenticated automatically on Frame as well (SSO).



Frame integrated its authentication system with Jostens' own unique login process

STORAGE INTEGRATIONS

Jostens customers were used to high-performance access to a shared storage medium. While Dropbox and Google Drive could be adapted to serve this purpose, their performance was not ideal when as many as 30 users needed to simultaneously access a shared account. To address this need for high-performance, collaborative data management, Xi Frame enabled its managed utility server feature. This gave each school its own private storage space, which, combined with the Jostens-Frame authentication integration, made it possible to run all schools from a single multi-tenant account.

Students could still use their private Dropbox and Google Drive accounts as a mechanism for uploading photo images to the shared drive. They could also use the Xi Frame upload feature which uploads files from their local computer. Jostens also enabled uploads via their YearTech plugin. So, students have several choices for uploading data to suit a variety of needs.

The core storage servers are set up to do regular backups, ensuring all data is safe and secure. This was initially created to guard against any potential failures of the storage system. However, in practice, Jostens found that the backups were more useful to resolve issues where students accidentally deleted data—a fairly common occurrence. At first, file recovery required a support ticket, but this quickly became burdensome. So Nutanix developed an option that let each school access read-only backups to recover deleted files on their own. With this feature, recovery requests dropped to zero.

EFFICIENCY AT SCALE

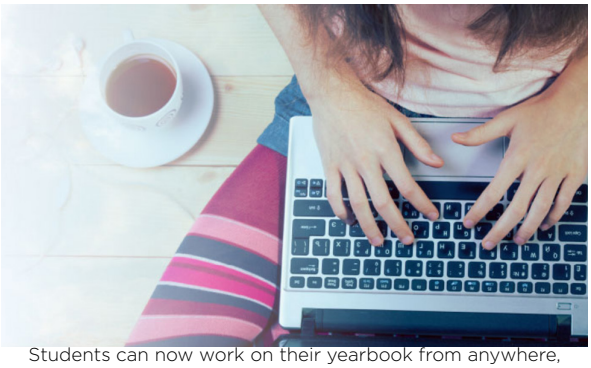
The cloud brings efficiency at scale. What used to be hundreds of separate, distinct IT efforts across schools throughout the country has now become consolidated to a set of simplified tasks performed by Jostens that scales across all schools instantly. Imagine all the time that it used to take for every IT department to setup and maintain all of the software needed on individual computers. Now school IT departments need to maintain just one simple thing: a browser on each device.

REAPING THE REWARDS

Today, Monarch by Jostens is in its third year of production deployments having already had tens of thousands of students design their yearbooks online across the US and Canada.

FOR SCHOOLS AND STUDENTS, THE BENEFITS WERE CLEAR:

- **Work from anywhere:** PCs or Macs in school labs or at home
- **Work on any device:** even mobile devices and Chromebooks can access Monarch
- **Bring in data from multiple sources:** Google Drive, Dropbox, local files, smart phones
- **Collaborate securely:** each school gets its own private storage space
- **Know that data is safe and backed up:** ensure that deleted files aren't really lost
- **Zero software management:** No need to install software or fonts on the school computers and servers



Students can now work on their yearbook from anywhere, not just in the school computer lab

FOR JOSTENS, THE BENEFITS WENT EVEN FURTHER:

- **Greatly simplified management:** schools across all states and Canada are managed from just three regional accounts
- **Dramatically lowered support burden:** call volumes and complexity of issues dropped as Jostens now only needs to maintain support for one OS/Adobe Tools/YearTech version
- **Cost effective:** Jostens pays only for what they use, even as peak loads vary dramatically throughout the school year
- **Zero investment in hardware:** Jostens did not need to buy a single server, take up any on-prem data center space, or enter into complex co-location service agreements
- **Instant updates:** all schools get the latest software versions with the click of a single button
- **Automated scaling:** Manage capacity across all schools at once with instant-on access to apps

To learn more about Jostens and Monarch, visit their site here.

> **"Jostens understands the benefits of Adobe software as part of the educational process and its importance in preparing for college and careers, so finding access for schools to the latest version was critical for us. We tested many options, but none provided the user experience we wanted. Xi Frame has enabled us to find the right solution to allow schools to create yearbooks anytime from anywhere, using genuine Adobe software. Frame has been so easy to work with, and we've been able to make continuous improvements to make Monarch a world-class platform. Monarch has truly changed the way students create yearbooks, newspapers and even literary magazines. It's been amazing to watch this vision become a reality."**
>
> – Betty Bacon, Director of Technology, Jostens

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