PURESTORAGE®

POP is an award-winning marketing agency that uses an advanced IT infrastructure to support the creative, technical and account management efforts for its clients. A commitment to meet the demanding productivity needs of its employees with a high-performance VDI environment led POP to re-architect its storage systems. Adding an all-flash array from Pure Storage has delivered astounding performance gains for graphics-intensive applications, simplified storage management, and improved access to agency resources for employees from remote locations.

POP

BUSINESS TRANSFORMATION

Creative personnel can explore and generate more campaign concepts faster than ever and software developers complete projects more quickly.

GEO

North America

INDUSTRY

Professional Services

"It's hard to imagine how a storage array allows you to be more creative, but it does."

Rob Blaylock, *Director of IT*

POP TEAMS WITH PURE STORAGE TO UNLEASH ITS CREATIVE JUICES

POP is a Seattle-based full service agency that produces leading-edge marketing campaigns and tools for prominent clients such as Microsoft, Starbucks, VMware and Target. With its digital roots dating back to the early days of Internet commerce, POP has always had a focus on combining advanced technology with creative brilliance to produce electrifying results for clients.

Virtualization is among POP's key technology initiatives, providing distinct creative and productivity advantages. All of its servers have been virtualized using VMware vSphere, and about a third of its end-users have been moved to a virtual desktop infrastructure (VDI) using VMware Horizon, with a goal of adding to that number in the months ahead.

VDI is a critical tool for POP in several respects. "We have a roaming workforce, and a virtual desktop gives people access to applications and files anywhere/anytime in a consistent experience," said Rob Blaylock, Director of IT at POP for the past 10 years. "In addition, we have 30 people doing design and development work in Costa Rica, but the data they need is in Seattle. So VDI is a way to bring the user to the data, rather than try to move the data to the user.

"Finally, we use VDI as a disaster-recovery tool. If we ever have a situation where folks couldn't come into the office because of some disaster, VDI is a way to put up a lot of desktops quickly."

PURE STORAGE SELECTED FOR HIGH-PERFORMANCE NEEDS

Blaylock and his team are especially aware of the benefits and requirements of a virtualized infrastructure, as VMware is a client of the agency. "We are committed to having the best possible VMware environment that delivers the best possible user experience." Blaylock wants as many agency employees as possible to be on VDI, and recognizes that virtualization can sometimes place heavy demands on storage systems.

As a result, the IT team re-thought its approach to storage in 2015. Previously, the company adopted a strategy of having as few IT vendors as possible. In the case of storage, that meant a single storage system had to be all things to all applications.

POP's legacy storage system "was doing the job, but it had limited performance parameters inherent to its architecture," Blaylock noted. "And because we were trying to do four or five things with one array, it was a complex configuration," which put a burden on the agency's small IT staff.

COMPANY:

POP
www.wearepop.com

USE CASE:

- VSI – VMware® vSphere®
- VDI – VMware Horizon

CHALLENGES:

- Intensifying client deadlines, data-intensive applications and growing remote workforce place persistent performance demands on agency's virtualized infrastructure.

IT TRANSFORMATION:

- Vastly accelerated performance on high-intensity graphics processing applications spurs greater creativity.
- Effortless storage is a perfect fit for a small IT staff.
- High data-reduction ratios drastically improve TCO and extend storage life.

"Of the three vendors we selected, Pure Storage was the least known to us. But in every aspect, Pure Storage is just put together better than the other vendors' equipment."

Rob Blaylock, *Director of IT*

The team decided to pursue a multi-tiered storage strategy and "best-of-breed" approach to picking storage suppliers, selecting products from three providers. Pure Storage was picked to host all the high-performance needs of the agency. That includes 600 virtual machines and all the applications — both creative and back-office — necessary to run the business.

"One of the reasons we did the storage upgrade was to support a larger number of VDI sessions in the future," Blaylock noted, "so we wanted something that would be scalable over the long term."

The selection of Pure Storage came after Blaylock discussed POP's needs with Integrated Archive Systems, IAS, a consulting and systems-integration firm. Rick Lund, who leads the IAS team, said after studying POP's requirements that "it was obvious that effortlessness and efficiency were top priorities for POP and this is where Pure Storage aligns perfectly."

PURE STORAGE PERFORMANCE GIVES A BOOST TO THE CREATIVE PROCESS

Once Pure Storage was installed, POP's IT team quickly saw benefits they didn't expect.

"We didn't buy Pure Storage to necessarily increase our performance. We were trying to solve a management and scalability problem," Blaylock reported. "But we found there was a noticeable difference in performance due to the Pure Storage array and the higher I/O it was able to deliver for VDI sessions. Almost immediately we had several VDI users say 'Did you guys do something? Everything seems to be faster.'"

He added, "It showed us how the performance of the file system affects everything."

Even unpacking the Pure Storage array was an eye-opening experience, Blaylock reported. "We were opening storage equipment from three vendors side by side, and there were very noticeable differences between them. Opening the Pure Storage box was an Apple-like experience. The box is nice; the documentation was beautiful and clean and precise. It was everything you would want to have in the box," said Blaylock.

"Of the three vendors we selected, Pure Storage was the least known to us," he added. "But in every aspect, Pure is just put together better than the other vendors' equipment."

One of the most dramatic instances of improved performance has been in a group of VDI users working on immersive 360-degree video. Multiple cameras are mounted in an outward-facing circle, all shooting 4K video simultaneously. Back in the POP studio, digital artists have to "stitch" those multiple streams of video into a single 360-degree experience. That is an extremely compute-intensive process involving huge amounts of data.

To handle the processing, POP uses NVIDIA® Tesla M6 graphics-processing blades mounted in Cisco® UCS servers, with the Pure Storage array providing storage. This configuration replaced the use of technical workstations. With the Pure Storage-NVIDIA-Cisco solution in place, the time needed to process 360-degree video has shrunk dramatically — from around 10 minutes per frame to nearly 3 frames per second.

When the artist running the stitching program first used the new configuration, "he just laughed out loud, it was so fast," observed Joe Costello, a systems engineer at POP.

The impact on the agency goes way beyond faster performance, Blaylock noted. "It's hard to imagine how a storage array allows you to be more creative, but it does. Previously, we had one chance to get this complex video project right. That's because

> "I haven't been this excited about a piece of gear in 15 years."

Rob Blaylock, *Director of IT*

it would take so long to rerun the program. And that threatened our ability to deliver a finished product in time to meet the client deadline. But now, we have the opportunity to get feedback from the client, to change things, to try alternative approaches," said Blaylock.

"Creativity comes from being able to do things multiple times, not just once," added Blaylock. "It's a massive improvement to be able to take feedback from a client and know you actually have the option to do something more for them versus having to settle for what the system can do for you in a given amount of time."

STORAGE MANAGEMENT GREATLY SIMPLIFIED

The improved storage performance provided by Pure Storage also has benefited the software development team at POP. "They are able to compile code faster, which means they can make more changes more often, resulting in a better output with fewer bugs," Blaylock said. "We have seen our more technical users migrate to our VDI, just to have access to the higher-performing environment."

From an IT perspective, Blaylock and Costello praised a number of Pure Storage features. This includes ease of use, high data-reduction ratios, the speed of cloning VMs and encryption at rest, which many of POPs larger clients require as a condition of working with them. With Pure Storage, Blaylock noted, encryption at rest is a native capability that is easy to implement and doesn't affect performance.

"The configuration difference between our old array and Pure Storage is as far apart as you can get," Blaylock said. "Unlike our legacy storage systems, Pure Storage is ridiculously effortless. And that's a huge benefit for a small IT team."

Costello said POP has realized data-reduction rates of between 8.5:1 to 10:1 on its VDI environment, and nearly 6:1 overall. "That is better than I expected," he added. "I thought the Pure Storage array would be full by now, but we're still at only 70% of capacity."

"Having granular scalability to grow the array was a big issue for us when we were evaluating vendors," added Blaylock. "And the ease of scalability was a big factor in selecting Pure Storage. I would have thought we'd have to buy more capacity by now, but we still have 30% available, so I can delay a purchase until the next budget cycle."

The ease of administration of Pure Storage has impressed the IT veterans at POP. "We've worked with a lot of arrays over the years and Pure Storage by far takes the least amount of effort to manage," Blaylock noted. "The scaled-back administrative landscape you have to deal with is small enough that you can easily see what's happening at any time."

"With Pure Storage, members of our IT team without storage expertise can easily administer the array without extensive configuration tuning or training," added Costello. "And that's a huge productivity win for a small IT team."

"Most of our conversations in the hallway are about client work, but since we did the storage upgrade a lot more people are asking what we have done, and how they can get on the VDI," Blaylock concluded. "Getting excited about a piece of hardware is not something I do anymore. But I've been telling my CEO how great Pure Storage is as a product and as a company. I haven't been this excited about a piece of gear in 15 years."

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