

CASE STUDY

Bank of Stockton Cashes in on Administrative Cost Savings with Tintri IntelliFlash™

IntelliFlash



The 151-year-old Bank of Stockton is the oldest bank in California, but has long been a market leader in adopting new technologies to deliver improved customer convenience and service. The bank was the first in its market to offer electronic banking, internet banking, and now mobile banking services. Bank of Stockton has sixteen branches spread across seven counties in the San Joaquin Valley of Central California and beyond. The bank's latest technology initiative is a virtual desktop infrastructure project powered by IntelliFlash.

The Challenges: Insufficient Capacity to Manage Branches During Peak Activity

The bank was having difficulty managing, troubleshooting, and repairing distributed desktop computers. VDI users experienced a severe service slowdown when activity at the branches peaked around the lunch hour. According to Vincent Lo, Vice President, Applications and Support, when a physical desktop computer user had a problem it could take up to two hours for a technician to get to the branch site.

To solve the problem, Lo and his team launched a virtual desktop infrastructure (VDI) initiative at the bank to centralize administration of desktop computers installed at its branches. The initial VDI rollout included eighty virtualized desktops running VMware View hosted on legacy storage system. The VDI instances were split across the bank's headquarters facility in Stockton and a disaster recovery site in Sacramento.

Soon after the rollout, VDI users experienced a severe service slowdown when activity at the branches peaked around the lunch hour. The high volume of customer activity overwhelmed the IOPS capacity of their storage sending Lo on a search for a storage upgrade that could deliver the IOPS to keep up with the VDI requirements.

The Solution: Tintri IntelliFlash

Lo was considering proposals from various vendors when his colleagues at the nearby University of the Pacific recommended IntelliFlash. Bank of Stockton has close ties with UOP, sometimes sharing technology, and the Eberhardt School of Business at the university is named in honor of the family of bank President Douglass Eberhardt. UOP is also the site of a 7,000-user IntelliFlash VDI installation.

A project committee at the bank analyzed the proposals using a weighted scoring system and narrowed the choice down to IntelliFlash. The IntelliFlash system leverages the performance of flash storage and the cost and capacity of hard-disk drives. Having a vastly better value proposition plus the recommendation from UOP, Lo purchased two IntelliFlash systems connected via 10-Gigabit Ethernet to Cisco Nexus® switches.

The IntelliFlash systems intelligently integrate DRAM, flash, and hard-disk storage, creating an optimized storage appliance to realize the holy grail of storage—high performance, high capacity, and high reliability at low cost. It combines this unique technology approach with best-in-class data protection features and an extremely friendly user interface to take storage to a whole new level of usability.

The Results: Higher Performance with Improved User Experience

Lo admits that he purchased more capacity than what was recommended by Tintri because he simply did not believe the company's claims about the effectiveness of its real-time data deduplication and compression technology. The bank's IT staff calculated that it would need about 8TB to support 100 VDI instances it was about to spin up as well as its other applications.

Challenges

- Insufficient capacity to manage branches during peak activity
- Lengthy response to service issues

Solution

- Tintri IntelliFlash T-Series

Results

- Enhanced user experience
- Six times the performance over incumbent storage.
- High performance, high capacity, and high reliability at low cost



"But the predictions about data reduction were right on target," said Lo. The bank's virtual desktops and other data consumed just 3TB of capacity-optimized by IntelliFlash, leaving ample headroom for expansion.

"Their data reduction claims were accurate and then some," he said. "We just didn't believe them, this being a new working relationship and all. I didn't want to buy something and find that they shortchanged me, and I might have to buy another expansion shelf three months into the project. They meant what they said. I just didn't believe them at first."

The IntelliFlash solution delivered more than six times the performance of the bank's existing legacy storage with significant cost savings compared to another vendor's proposal. "It would have cost me quite a bit more for lesser performance with the NetApp, so the price-performance value was much higher with IntelliFlash," said Lo. "We're very happy with our configuration now."

Instead of using the more common linked-clones VDI scheme, Bank of Stockton uses persistent desktop images, introducing a higher I/O load on SAN storage in a VDI install. Persistent desktops also made virus scanning more demanding and that led to a performance issue but also demonstrated Tintri's obsessive commitment to customer service and support.

Dating back to its physical desktop days, Bank of Stockton's policy was to run a virus scan simultaneously on all desktops on Saturday night when system usage was minimal. Shortly after the IntelliFlash systems were installed, Lo noticed a severe system slowdown one Saturday. While still unsure of the cause, Lo fired off an email to Tintri to let them know about the slowdown.

Within ten minutes Lo received a call back from a Tintri Vice President offering to set up a video conference with a company technician who traced the problem to the SAN and immediately took ownership, ultimately identifying the cause of the slowdown as the impact of virus scanning persistent virtual desktops concurrently. Bank of Stockton modified its policy and now scans one-sixth of the VDI instances each night.

The experience validated that Lo had made the right call in choosing IntelliFlash and ended any concerns about trusting his storage infrastructure to Tintri, to the extent that the Bank of Stockton purchased another IntelliFlash system to host a second VDI environment at the DR site.

"I've been in the IT business for twenty-five years and this is the strongest customer support I have seen. These people bend over backwards," said Lo. "It just doesn't happen for people to deliver at their level of service. I would not count on that with any other major company that I deal with. You just don't get that level of commitment from a vendor."

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Vincent Lo, Vice President, Applications and Support, Bank of Stockton

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