



CASESTUDY

SAN DIEGO PADRES



Location

North America

Industry

Sports

Company

San Diego Padres

Use Case

- Database – Microsoft SQL Server®, Microsoft Dynamics® CRM
- VSI – VMware® vSphere®

Business Transformation

The sales staff has uninterrupted access to critical customer data. The baseball operations and business intelligence units can perform complex data analysis without impacting the performance of other systems. And the IT staff spends almost no time managing storage, freeing up time for more strategic activities.

Challenges

- Legacy storage environment couldn't support multiple, simultaneous workloads.
- Sluggish storage performance resulted in unacceptably slow access to critical CRM data.

IT Transformation

- FlashStack™ handles multiple workloads concurrently with no performance degradation.
- Latencies for key database applications slashed by up to 98%.
- Time to perform nightly database backup reduced from 8 hours to 2 hours.
- 4:1 data reduction greatly boosts storage efficiency, and provides capacity to support new applications.





San Diego Padres Make Blockbuster Trade for Pure Storage to Hit CRM Performance Gains Out of the Park

For the thousands of fans enjoying a San Diego Padres game at Petco Park, topics like databases and virtualized servers are the farthest things from their minds. But behind the scenes, information technology is a vital element in creating a positive experience for fans and in helping the club succeed.

“Instead of being an old-style break/fix department, we are a full-service shop,” according to Ray Chan, Vice President of Information

Technology for the Padres. “We are a solutions provider and a partner to all the different business units — baseball operations, sales, and all the non-baseball events that take place at Petco Park.”

He added, “It’s our job to make our clients more efficient, whether they are here in San Diego or away, like our scouts.”

If scoring runs is the goal on the field, then the highest priority in the back office is to create demand for tickets, especially season tickets. For that reason, Chan said, the “lifeline” of the Padres’ IT infrastructure is its

customer relationship management (CRM) system, based on Microsoft Dynamics and SQL Server. “It holds all the data about our season-ticket holders and other customers, as well as potential customers. Our sales staff is in and out of that system constantly.”

Other applications also use the CRM data warehouse, including the telephone system, business intelligence (BI) team and the Fortress access-control system, which combines access to the stadium and to suites, as well as information about customer preferences and concessions. Petco Park is in use throughout

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RAY CHAN

Vice President, Information Technology





the year, not just during home games, as it is a popular venue for concerts, corporate events and other large-scale gatherings.

Legacy Storage Couldn't Support Concurrent Workloads

With so many applications accessing the CRM database, contention for resources became an issue. "As the organization grew, performance decreased. What pushed it past its limits was the heavy utilization of our databases and desire for simultaneous connections," Chan said. "If baseball operations was performing some computationally heavy task, that would impact everyone. If you were in sales and

tried to pull up a customer record, you might have to wait a minute to access even routine information.

"Over time, we started to see this problem occur more frequently, and heard an increasing number of complaints," he added. "The bottleneck was access to storage. So, it was essential that we get a storage system with better performance."

To boost performance, the IT team added about 10TB of flash memory to its legacy spinning-disk storage system. But because that system was SATA-based, it didn't solve the problem of contention for resources. "We couldn't even move all our VMs to it."

While investigating options for new storage, Chan came across Pure Storage. During a visit to the company's Mountain View, CA, headquarters, "I was impressed by the culture, the management and the simplicity and performance of the Pure array. I also took notice of

the momentum Pure has built in the market."

Following that visit, Chan arranged a proof-of-concept trial for a Pure Storage FlashArray. Michael Cross, Senior Network Administrator, oversaw the POC. "We tested a couple of our database servers, looking for differences that would directly correlate with improvements in our production applications," Cross said. "We saw a really big improvement. With our legacy storage system, we regularly saw latencies of between 10 and 40 milliseconds. With Pure, latencies were consistently sub-millisecond."

Based on results of the POC, the Padres purchased a FlashArray//M50. Cross migrated all major applications and databases onto the array over a two-week period. "The installation and migration went extremely well. Sometimes, when you do an upgrade or rip-and-replace,

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things can get messy. With Pure Storage, it was a simple process that exceeded my expectations. Compared to previous installs, it saved about three days of headaches.”

FlashStack Configuration Improves Performance

The Padres have been a user of Cisco Systems UCS servers since 2012, and is 99% virtualized using VMware vSphere. So, with the decision to use a Pure Storage flash array, it was logical to implement a FlashStack configuration, which is built upon Cisco servers and switches, Pure Storage arrays and VMware

software. FlashStack combines the latest in compute, network, storage hardware and virtualization software, into a single, integrated architecture that speeds time to deployment, lowers overall IT costs and reduces deployment risk. Highly efficient components reduce the costs associated with power, cooling and data center space.

“When I first got here, we had a lot of different servers, and it was very difficult to manage,” Chan recalled. “To be able to innovate in IT you have to have time. And if all you’re doing is managing systems and doing break-fix, you’re never going to have that time. But with UCS, you have a proven, stable platform that we like a lot. And the tight integration between UCS, Pure Storage and VMware through FlashStack is a real benefit because it simplifies planning, deployment and day-to-day management.”

The impact of the FlashStack configuration on the Padres organization has been widely felt.

The system’s ability to handle multiple workloads simultaneously has meant that contention for resources is no longer an issue. The 70-some members of the sales staff now have unimpeded access to the CRM system and its valuable customer data; the baseball operations team can run its computationally intensive work anytime it wants; and the business intelligence unit is able to perform a broader range of more complex analysis, using tools such as Tableau. “Our Pure Storage array is a very busy unit that doesn’t break a sweat. We’re very impressed by that,” Chan said.

Even fans have been affected, though they may not be aware of it. The Fortress access-control application utilizes scanners at the entrances to Petco Park to allow fans to enter the stadium and its box suites, meaning a barrage of calls to the database in a brief time. “It’s a benefit to everyone to get fans in as quickly as possible, so we rely on our IT infrastructure and storage to allow the access-control system to run at

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maximum capacity,” Cross noted. “Since installing the Pure Storage array as part of the FlashStack configuration, we’ve never experienced a delay because of storage.”

An early indication of the impact of Pure Storage came the first day after the baseball operations system was moved onto the new array. “Every night, they perform a backup of their system, and it always took 8 hours to perform,” Cross recalled. “I didn’t tell them when we moved the system onto Pure, so they weren’t expecting anything. The next day, I got a call from them saying their backup the night before had taken only two hours, and they were worried that something had gone wrong. I explained the change to new storage, and they said, ‘We love it; don’t change a thing.’”

Another benefit of the new storage system has been data-reduction rates consistently around 4:1, “which is well beyond what we were hoping for,” Cross noted. “That means when someone wants to add a new service or application, we don’t have to worry if there will be enough storage. We just spin up a new server, add the storage, and they have the resources they need. We don’t have to worry if it’s Tier 1 or Tier 2 or Tier 3 storage. With Pure Storage, everything is Tier 1.”

Cross also praised the Pure1® management tool “as a single pane of glass that allows you to quickly see all of your storage no matter where you are in the world.”

Simplified Management Makes Life in IT Easier

Cross has been especially impressed by the effortless management of the Pure Storage array. “One of the first things I noticed was how easy it is to navigate the interface and make changes. It really simplifies storage management. Being a small IT shop, we all perform several roles simultaneously. Having a system like Pure, which allows someone to be trained as a storage admin in just one day, is a massive benefit.”

The Padres organization also appreciates the simplicity of the Evergreen™ Storage program





from Pure Storage, which enables storage that is deployed once and upgraded as needed, for a decade or more. Components can be mixed and matched — all online and without performance disruption — to keep storage dense, efficient, and modern. “We really like the Evergreen program,” Chan said. “The fact that I don’t have to buy the same storage I already paid for makes so much sense, yet it is such a

departure from the way the storage industry has always operated. No one wants to ever have to rip and replace.”

Looking at cost-efficiency from another angle, Cross noted that with its high data-reduction rates, small data-center footprint and lower power costs, the FlashStack makes both capital and operating dollars go farther. “We don’t have to buy additional storage capacity as often, and when we do, the

process is much easier and less costly.”

Cross concluded, “During the process of selecting a new vendor, I’m always skeptical of the promises that are made. I can say I am pleasantly surprised by the fact that everything Pure said has come to be true.”

Added Chan, “FlashStack has transformed the way we interact with our fans.”

Products and Services

Unified Computing FlashStack:

- Cisco® UCS® servers
- Pure Storage FlashArray//M50
- VMware vSphere

Cisco Networking and Security Solutions:

- Cisco Nexus® switches

flashstack@purestorage.com

www.cisco.com/go/flashstack

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