



Beating the Curve: How Micron's RealSSD™ P300 Drive Plugged Into SoftLayer's Performance Parameters

A Micron/SoftLayer Case Study

About SoftLayer Technologies

Founded in 2005, Dallas, Texas-based SoftLayer Technologies is the world's largest privately owned hosting company, providing global, on-demand data center and hosting services from sites all over the U.S.

As an innovator in cloud, dedicated, and managed hosting, as well as truly virtual data centers, SoftLayer stands out with the industry's only fully automated platform—supplying enterprise access, control, security, and scalability via customer-friendly portals and remote-access capability. The company's secure-network-within-a-network topology is the first of its kind.

In addition to being a leading infrastructure-as-a-service (IaaS) hosting provider, SoftLayer also offers a broad suite of other services, including private networks, hardware, CloudLayer®, network, software, and security, as well as proprietary solutions.

"We try to offer up anything we can that a customer might desire, whether it be a physical solution, a virtualized solution, or a mixed combination thereof, with a single pane of glass, a single portal to manage that whole infrastructure," says Jacob Linscott, SoftLayer's VP of Information Systems. "Our customers range from 'mom-and-pop' to the Fortune 500. It's really anyone out there who needs a service, whether it be for a development environment, a small Web site, someone who wants to go out there and build their system to be able to scale up and down.

An A-La-Carte Approach to Diverse Customer Needs

Because SoftLayer's customer base is so broad, storage requirements aren't one-size-fits-all. The company helps

customers find scalable, application-specific solutions appropriate to their individual needs.

"We've seen a wide range of storage requirements, whether that be SATA, SAS, or Flash SSD. Our SSD-based systems are servers that have the option of including an SSD," Linscott explains. "We don't try to differentiate and say, 'This is a pure SSD-based solution.' We want the customer to come and pick and choose what's going to fit their mold for their desire, whether that be SAS for the OS drives and a slew of SSDs for their data set, or a combination of all SSD for faster OS response with small data sets."

"One of the main reasons why we looked to SSDs and some of the challenges we saw based off that was finding the customer or data set that was going to require all the benefits that you get out of running an SSD—higher throughput, more IOPs and less latency. Essentially, faster access to the disk," he says.

Finding the Right Product to Peg the Performance Curve

SoftLayer decided that SSDs were the right technology for their storage needs, but faced challenges in finding a specific product that could meet their capacity and performance requirements. As SoftLayer began combing through their distribution channel, they found Micron's P300 SSD.

"We reached out to some of our technology partners when we were doing our tests to help find the next product we wanted to offer. After looking at all the solutions available, we ran our gamut of tests and whittled down what we wanted," explains Linscott. "Micron fit that bill with its high-capacity, low-latency P300 SATA drives."

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"We chose the Micron P300 after running the drive through a series of tests from multiple vendors and our own internal testing parameters. We stressed the drives; we tried to do everything that we were going to see out there—we looked for a predictable performance curve. We don't look for the highs and lows necessarily, as much as we do for a predictable curve over certain data sets. This will get us what we need for ANY solution," he elaborates. "The P300 fit all the performance characteristics we needed, and the capacity was exactly what we required."

Finding the Right Supplier to Meet the Ordering Volume

But SoftLayer also needed a provider who could supply the quantity of drives they needed. As a major NAND manufacturer, Micron was well-equipped to handle the volume, and soon the two companies were getting on the same page about the role of enterprise-level Micron SSDs in SoftLayer's business.

"At that point, we started finding everything [supply of P300 drives] that was available in the channels, and Micron realized there was a company out there with heavy

interest, and we reached out to them, they reached out to us—so that we kind of meet in the middle to make sure that both companies were in the same place as to where we were going, what we were expecting, what we wanted out of the relationship, and where we were looking to go in the future," Linscott recalls.

The Future of SSDs in High-Demand Hosted Applications

The ever-more-demanding nature of Internet traffic and the hosting technologies that service it will likely mean an increasingly positive outlook for SSDs, whose performance characteristics are an ideal match for these kinds of applications.

"We see the future moving toward an SSD solution, due to the fact that there are a lot more I/O-intensive applications out there that drive customers to a solution that provides that," Linscott predicts. "More and more businesses are investing in the Web, more and more media out there are more transactional-based, higher-throughput needs, instant-on, instant access, and this is where the low latency of an SSD provides those additional benefits."



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