mercado libre

MERCADOLIBRE | PROBLEM SOLVED

MercadoLibre resolved slow, unpredictable performance by implementing a NetApp® SolidFire® flash solution that offered additional benefits without additional complexity.
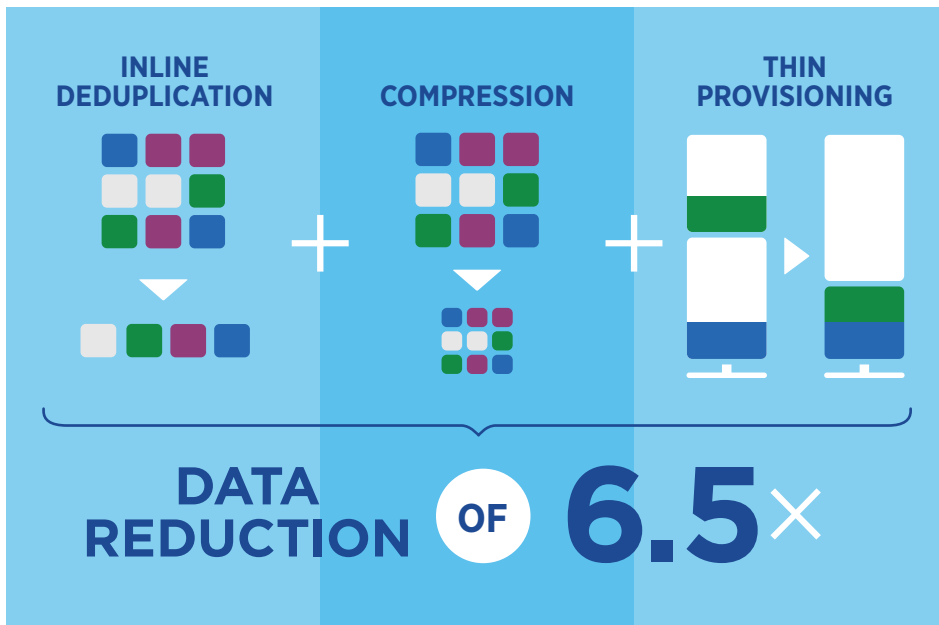
Speeding up E-Commerce with Flash

MercadoLibre is the undisputed leader in Latin American e-commerce. Operating in 13 countries, it provides buyers and sellers a robust online trading environment that fosters the development of a large and growing e-commerce community. To meet its goals of scaling out, and growing both capacity and performance, the company turned to NetApp® SolidFire®.

OPERATES IN
13
COUNTRIES

LATENCY REDUCED FROM
50 ms
▼
~2 ms

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■ NetApp®

INLINE DEDUPLICATION + **COMPRESSION** + **THIN PROVISIONING**

DATA REDUCTION OF **6.5×**

advertising, and e-building solutions. It evaluated a variety of storage solutions to deliver higher performance while reducing latency—some all-flash, some not. MercadoLibre had clear requirements around OpenStack integration, scale-out, consistent 3ms latency, and native remote replication features.

Finding a scale-out solution was also important to MercadoLibre. "Scale-up architectures force customers to purchase a new system when physical performance and capacity limits are met. They also force downtime during migration.

ENSURING ONLINE AUCTIONS ARE ONLY AS VOLATILE AS THE BIDDING

When it comes to deploying an IT infrastructure capable of supporting development and production environments for a company dubbed the 'eBay of Latin America,' success depends on high-performance, highly scalable storage. Trouble was, within its OpenStack cloud, MercadoLibre ran a variety of applications, including MySQL and MongoDB databases, all of which were suffering from slow, unpredictable performance. Finding a solution that satisfied everyone's needs was a tremendous challenge.

PREDICTABILITY FOR ADMINISTRATORS

"Our administrators asked us for more efficient storage," Mariano Guelar, MercadoLibre storage specialist says. "We had a lot of trouble balancing multiple workloads and satisfying everyone's performance and latency requirements."

Guelar elaborates, "Our search for a high-performance storage solution led us to SolidFire. With it, we're able to give better service to MercadoLibre's developers and DBAs."

THE WHOLE STORY

MercadoLibre offers a wide range of services to sellers and buyers throughout Latin America, including marketplace, payments,

BUSINESS BENEFITS

- 12 SolidFire SF6010 deployed in U.S.-based data center

- High-performance block storage for OpenStack private cloud

- Reduced data center footprint, power, and cooling

- Improved latency by up to 25x

- Scale-out architecture enabled granular growth

NetApp®

> "We were looking for a solution that could scale out so that we could add more and more nodes, growing capacity and performance without downtime. With SolidFire, we can start with a small infrastructure and grow linearly, granularly— adding nodes incrementally as demand dictates."
>
> Mariano Guelar
> Storage Specialist, MercadoLibre

As a 24/7 online marketplace we need 100% uptime. We wanted to start small and add the capacity and performance as needed," says Guelar.

First introduced to SolidFire at the Fall 2013 OpenStack Summit in Hong Kong, MercadoLibre heard about SolidFire from an existing U.S.-based SolidFire customer. "We did a demo to see the product interface, and then did some tests with the data to evaluate how SolidFire was able to meet our requirements," Guelar explains. "We liked what we saw, and it was easy to manage."

COMPREHENSIVE OPENSTACK INTEGRATION
Because MercadoLibre uses OpenStack for its private cloud, successful integration with the cloud orchestration OS was critical. SolidFire's Cinder driver is natively integrated with OpenStack, and SolidFire can be easily managed from within Horizon. "Integration with OpenStack was one of our key

requirements for a new storage solution. SolidFire seamlessly integrates with OpenStack, as it's specifically built to enable demanding cloud environments," Guelar says.

MORE PREDICTABLE PERFORMANCE
Database and system administrators at MercadoLibre needed storage that provided more predictable performance and application response times. SolidFire's all-flash architecture and unique Quality of Service (QoS) allowed MercadoLibre to significantly reduce latency.

SCALING ON DEMAND
MercadoLibre's prior storage system didn't scale easily or nondisruptively, and the company needed its new storage solution to scale granularly. "We were looking for a solution that could scale out so that we could add more and more nodes, growing capacity and performance without downtime. With SolidFire, we can start with a small infrastructure and grow linearly,

granularly—adding nodes incrementally as demand dictates."

INTEGRATED DATA PROTECTION
MercadoLibre keeps a copy of its data in two physically separate systems, therefore remote replication was a must-have feature. Additionally, it preferred array-based remote replication so it could be managed from Cinder.

"Native was better because integration with Cinder was also very important. When you create a replica in OpenStack, it can automatically create a replica on the other side," Guelar says. "We don't have to select the volume and configure the replica. Everything can be done automatically."

REDUCING THE STORAGE FOOTPRINT
Because it deploys multiple copies of its MongoDB database, MercadoLibre gets significant data reduction through SolidFire's

NetApp®

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Mariano Guelar, Storage Specialist, MercadoLibre

always-on, inline deduplication and compression.

"We have a lot of copies. For example, the MongoDB databases have different shards. Each shard has three nodes with the same copy and data. The data is written to those three nodes, then all the information is read and replicated between them," Guelar says. "SolidFire's compression and deduplication increases effective capacity and reduces both our data center footprint and power consumption."

BUSINESS RESULTS

MercadoLibre's performance improvements were immediate. "With SolidFire, not only has our latency been improved from about 50 ms to approximately 2ms, but it has also eliminated the variable latency that was a huge issue with our old storage system," Guelar says.

Inline deduplication, compression, and thin provisioning have reduced its data by 6.5x, allowing MercadoLibre to shrink its data center footprint, Guelar explains.

"We are saving a lot of space and power in our data center now, so that's a great benefit. That was really, really good for us."

For companies looking to deploy an OpenStack private cloud, Guelar would recommend SolidFire. "It's a very good product. For a cloud service company or any company that has its own cloud with OpenStack, it's great. It's great how SolidFire and OpenStack interact with each other and I like the way it scales."

LEARN MORE

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