We guarantee the unpredictability of online auctions.

“We were looking for a solution that could scale out so that we can add more and more nodes, growing capacity and performance without downtime. With SolidFire, we can start with a small infrastructure and add the nodes and grow linearly, granularly.”

Mariano Guelar
MercadoLibre Storage Specialist
MercadoLibre is the undisputed leader in Latin American e-commerce. Operating in 13 countries including Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela, MercadoLibre provides buyers and sellers a robust online trading environment that fosters the development of a large and growing e-commerce community.

How MercadoLibre makes sure 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.

What predictability means to MercadoLibre administrators

“Administrators were asking us to give them a different type of storage, more efficient,” Mariano Guelar, MercadoLibre storage specialist said. “We had a lot of trouble balancing workload within the storage. It was not easy to find a place where everyone was satisfied with the performance and latency.”

Guelar elaborated, “We were looking for a solution that gives us very good performance. With SolidFire, the performance is very good. We’re able to give a better service to our developers and our DBAs here at MercadoLibre.”

“Our partnership with SolidFire has provided us with so many benefits. We can now confidently say to our customers that we are using state-of-the-art storage, and that they’re getting the benefits of this without any additional complexity.”

Mariano Guelar
MercadoLibre Storage Specialist
The Whole Story

MercadoLibre offers a wide range of services to sellers and buyers throughout Latin America, including marketplace, payments, advertising, and e-building solutions. They evaluated a variety of storage solutions to deliver higher performance while reducing latency — some all-flash, some not. They had clear requirements around OpenStack integration, scale-out, consistent three-millisecond latency, and native remote replication features.

Finding a scale-out solution was also important to MercadoLibre. “Scale-up is not very easy because the way to scale it up is to buy a bigger one. You need to have downtime during migration, and that’s not good for us because we are up 24/7 and need 100% uptime,” Guelar said. “We wanted a solution that you can start small and add the capacity and performance we need when we need them.”

Ensuring faster, 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.

“Scale-up is not very easy because the way to scale it up is to buy a bigger one. You need to have downtime during migration, and that’s not good for us because we are up 24/7 and need 100% uptime.”

Mariano Guelar
MercadoLibre Storage Specialist

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. “One of the requirements that new storage had to have was an integration with OpenStack. We found with SolidFire that it integrates very well with OpenStack and our cloud solution,” Guelar said.

Scale on demand as business grows

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 can add more and more nodes, growing capacity and performance without downtime. With SolidFire, we can start with a small infrastructure and add the nodes and grow linearly, granularly,” Guelar said.
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 said. “We don’t have to select the volume and configure the replica. It can be done, everything, automatically.”

Reducing the storage footprint

Because it deploys multiple copies of its MongoDB database, MercadoLibre gets significant data reduction through SolidFire’s 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 — the same copy and data. They write that data to those three nodes, they read all the information and then replicate between them,” Guelar said. “The compression and deduplication that SolidFire has, that’s good to save space and data center footprint and reduce power.”

Business Results

MercadoLibre’s performance improvements were immediate. “Our latency is now around two milliseconds. With our old storage, latency was variable and that was an issue. It had a lot of peaks with very high latency around 50 milliseconds, so that was very bad,” Guelar said.

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

Key Highlights

**INDUSTRY:** ONLINE COMMERCE

**KEY BENEFITS:**
- Scale-out
- Guaranteed Performance
- In-line Efficiency

**SOLUTION:**
- 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 enables granular growth
Be fueled by SolidFire. Do what's never been done.