



SUCCESS STORY
Software Services



FICO | PROBLEM SOLVED

To meet the needs of its new FICO® Analytic Cloud clients, FICO adopted NetApp® SolidFire® all-flash storage to maximize flexibility, accelerate deployments, and cut the costs of cloud.

Accelerated Time-to-Market Through Cloud Services Powered by Flash

Global analytics software company FICO—best-known for the FICO credit score lending institutions use for risk assessment—adopted NetApp® SolidFire® to meet the needs of its new FICO Analytic Cloud. The all-flash storage solution allowed FICO to manage analytic workloads with staggering I/O requirements, improve its ease of use, and accelerate time-to-market for next-generation products and services.

HIGHEST
LATENCY
ON VMWARE
WORKLOADS:
2.1MS



BATCH RUN TIME
REDUCED FROM
10 HOURS
▶ 1 HOUR

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“We tested many different solutions but found SolidFire offered us the easiest API that readily enabled our requirements for on-demand provisioning in a multitenancy environment.”

Donald Talton
Senior Manager, Platform Operations & Cloud Engineering, FICO

FICO is far more than a credit-scoring company. Founded in 1956, FICO is a market leader with a wide range of intelligent analytics and software tools that help businesses in more than 100 countries combat fraud and make better decisions. Seeking to extend its market reach and leadership, FICO recently transformed to a more service-based business model and chose NetApp SolidFire® for its all-flash scale-out storage.

MAXIMIZED FLEXIBILITY, ACCELERATED DEPLOYMENTS

FICO is well known as an innovator in Big Data and analytics, which presents unique storage challenges for the seamless online delivery of applications and capabilities. By choosing SolidFire all-flash storage for its new FICO Analytic Cloud, FICO is pushing the limits of high performance, scalability, and platform extensibility.

Now, equipped with a solution for its demanding storage requirements, FICO is overcoming everything from analytic workloads with staggering



I/O requirements to ease of use and integration with leading cloud orchestration and virtualization technologies. In the process, they are spurring Big Data innovation by giving application developers, business users, and FICO partners one-stop access to best-in-class analytics, decision-management tools, and technology.

SIGNIFICANCE TO FICO'S CUSTOMERS

SolidFire's integration with OpenStack and VMware, along with its ability to reduce redundancies of multiple shared workloads and guarantee exact levels of

performance and capacity, enables FICO to guarantee Quality of Service (QoS) and meet service level agreements (SLAs) for its FICO Analytic Cloud clients. 

“We use SolidFire when applications demand low latency and extreme performance,” says Donald Talton, FICO's senior manager of Platform Operations & Engineering.

LEVERAGING INFRASTRUCTURE

Debt management, decision management, fraud and security analytics, customer engagement, Big Data—for many years, FICO's groundbreaking use of mathematical algorithms to predict customer behavior has changed the way risk is managed and products are marketed throughout the world. After 60 years of industry leadership, FICO saw that to continue shaping the future, it had to move beyond the Tier 1 financial services entities it already served and reach middle-market customers, including credit unions, mortgage lenders,

mobile companies, and a broader array of government organizations. Furthermore, FICO aimed to leverage the intellectual property underlying its predictive-analytics capabilities into new offerings such as network-security analysis.

TRANSFORMING TO A SaaS BUSINESS MODEL

These business goals spurred FICO to transform its technology infrastructure. To reach customers that could not afford or did not wish to support traditional on-premise software, FICO moved to a distributed Software as a Service (SaaS) model. The FICO Analytics Cloud is an environment for creating, customizing, and deploying analytics-driven applications and services. Built on an

OpenStack framework, the analytics cloud uses Red Hat's OpenShift Platform as a Service (PaaS). While still relying heavily on Ceph for general purpose storage, SolidFire helped FICO meet the needs of high-performance SLA workloads.

SATISFYING HIGH-PERFORMANCE USE CASES

FICO wanted an all-flash storage solution that could run not only OpenStack customer workloads but also internal VMware-based applications, including FICO's Horizon virtual desktop infrastructure (VDI). Databases requiring storage performance included Microsoft® SQL, MySQL, Couchbase, MongoDB, and Oracle.

BUSINESS BENEFITS

- Scale-out
- High availability
- Deep OpenStack and VMware integration
- Guaranteed performance

"We tested many different solutions but found SolidFire offered us the easiest API that readily enabled our requirements for on-demand provisioning in a multitenancy environment," recalls Talton. "We wanted to be able to run VDI on it—as well as OpenStack workloads—with guaranteed performance. No one but SolidFire could deliver that."

"This is why we selected SolidFire. The enterprise-grade storage platform helps ensure that we can deliver our state-of-the-art analytics and decision-management solutions at scale, with consistent levels of performance across workloads, and integration with both OpenStack and VMware."

Mike Trkay
Vice President of Global Technology Services at FICO

SolidFire systems leverage a scale-out storage architecture that enables linear scale of both capacity and performance in multi-tenant environments without downtime or performance impact. FICO learned about SolidFire when members of its Platform Operations & Cloud Engineering team ran into satisfied users from eBay and PayPal at an OpenStack Summit in Paris. FICO then performance-tested SolidFire on database-reliant applications with

“FICO has a demanding set of storage requirements— from analytic workloads with staggering I/O requirements to ease of use and integration with leading cloud orchestration and virtualization technologies — all of which fall right into SolidFire’s sweet spot.”

Dave Wright, SolidFire Founder, Vice President & GM

impressive results. The highest latency FICO has seen on VMware workloads using SolidFire is 2.1 milliseconds, with similar results on OpenStack.

“Our clients expect the same consistent and reliable performance within the FICO Analytic Cloud as they’ve grown to expect with our on-premise solutions,” says Mike Trkay, vice president of Global Technology Services at FICO. “This is why we selected SolidFire. The enterprise-grade storage platform helps ensure that we can deliver our state-of-the-art analytics and decision-management solutions at scale, with consistent levels of performance across workloads, and integration with both OpenStack and VMware.”

As FICO’s choice for high-performance, SLA-driven workloads, SolidFire delivers scalable, clustered all-flash storage with native in-line deduplication, compression, and replication. SolidFire is also very easy to use, Talton says.

“SCARY-SIMPLE” IMPLEMENTATION

Implementing storage solutions— setting up protocols and network connections—can be a complex challenge, says Talton. SolidFire, in contrast, is “scary simple.” Talton explains, “We can stand up a cluster in a day and overnight add the guaranteed IOPS that SolidFire provides in our data center. Users love the quick turnaround for storage provisioning, and IT loves it because we can prevent noisy neighbors.”

“From the OpenStack standpoint, it’s a no-brainer,” Talton continues. “You set a couple of Cinder tags for minimum, maximum, and burst policies, and you’re done; the volume gets created on the SolidFire array and has whatever policy you attach to it for performance. It took us just a few minutes. On the VMware side of things, we haven’t had to do any extra configuration or tuning on top of SolidFire out of the box. The big features we rely on are already native in SolidFire: in-line deduplication, compression, and replication.”

An added advantage of this simplicity, Talton says, is that as FICO moves to hyper-converged infrastructures, SolidFire brings storage management within reach of DevOps and other teams without forcing them to learn proprietary technologies. “You plug it in, you have a web interface, and everything is iSCSI; you don’t need a decade of experience as a storage administrator to understand what you’re looking at. SolidFire is storage purpose-built for the cloud.”

IT EFFICIENCIES, STRATEGIC ENABLEMENT

With SolidFire, FICO can run multiple heterogeneous workloads alongside one another and, through QoS, ensure that each workload receives the performance it needs. “Some of our applications are management, some monitoring, some capacity planning,” Talton says. “They might be customer-based or internal, like VDI. We might have databases running on SolidFire, supporting frontend, web-service-based applications running on SaaS. It depends on the specific

requirements set forth by the product groups, as well as contractually defined SLAs.”

In addition to the ability to guarantee high-performance SLAs, SolidFire delivers resource-saving IT efficiencies. In the VDI environment, for example, 4.5x deduplication improvement dramatically improves storage utilization. The storage density FICO can fit into a single rack with SolidFire is much higher than with legacy storage architectures. Batches that took 10 hours to run take just one hour on the SolidFire array.  Storage provisioning is automation-quick,

compared to weeks to configure and deploy storage through traditional ticketing systems. As FICO expands geographically around the world, SolidFire provides the flexibility to scale data center storage in alignment with in-country volumes. With storage management streamlined and DevOps teams empowered by SolidFire’s simplicity, storage engineers are free to pursue high-value initiatives. We’re enabling our infrastructure to maintain our market dominance,” says Talton.

With a finite number of Tier 1 financial services in the world and FICO already serving almost all of them,

the company’s growth strategy hinges on technology-enabled diversification supported by SolidFire.

“It all ties into reaching markets that were previously untappable,” Talton says. “We wouldn’t have been able to move toward a cloud-centric model without starting to decentralize things in a more distributed manner. The transformation is everything from an architecture and a mindset to how you spin up and deliver applications. You’re changing how quickly you can release next-generation products and services and build out performance to guarantee a better customer experience.”

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