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HELPING BANKS DRIVE TARGETED MARKETING DECISIONS

Purchase-based intelligence platform Cardlytics makes marketing more measurable and relevant with insights drawn from bank payment data

cardlytics

Banking & Finance | United States

Business needs

Cardlytics needed a computing environment with high availability, resilience, security and speed to analyze payment data and power purchase-based marketing solutions, including its proprietary in-bank marketing channel.

Solutions at a glance

- Data Center
  - Dell EMC XC630 and XC730xd Web-Scale Converged Appliances
  - Dell EMC PowerEdge R630 and R730 servers with the Intel® Xeon® processor E5 family
  - Nutanix™ Acropolis and Prism

Business results

- Improves storage performance to about 45,000 IOPS per node
- Gains a unified view of performance and reduces IT management burden
- Sets up bank partners in days instead of weeks, improving time-to-value
- Maintains 99.9% availability

"*In our efforts to be future ready, the Dell EMC XC Series is helping to increase our speed-to-market, which is a big thing for us. Our bank partners love a solution that allows them to get up and running fast, and ahead of the competition.*"

Jason Bray, Senior Vice President of Engineering, Cardlytics

Peter Drucker once said that the aim of marketing is to know and understand the customer so well that a product or service fits him and sells itself. And what better way to understand a customer's preferences than to know what that customer has already purchased? That's where Cardlytics comes in.

The Atlanta-based financial and marketing technology provider has rapidly grown from a scrappy IT startup to being a leader in purchase-based marketing. Cardlytics analyzes the anonymous purchase data from its banking industry partners to determine where and how cardholders shop, and then uses analytics to target relevant offers directly to the banks' customers. It now manages purchase-based marketing solutions for more than 1,500 bank partners, including Bank of America and PNC Financial Services Group. "Cardlytics has earned its leadership position, at least in part, due to the technology that we've developed over the last several years," says Jason Bray, senior vice president of engineering at Cardlytics.

Storage and computing demands grow exponentially

With its rapid growth in a heavily regulated and competitive industry, the company frequently needs to update its IT infrastructure. Its technology needs are twofold. At the banks, Cardlytics has technology installed that must be up and running 24x7, delivering offers directly to the customer through online banking and mobile platforms. The company's service level agreement calls for 99.9 percent reliability, so the systems must be highly available and include disaster recovery plans. "We expect that any hardware that we put in place is running behind the scenes and is monitored, resilient and secure," Bray says. In its data centers, Cardlytics maintains additional systems that turn purchase intelligence into targeted marketing campaigns for its retail industry partners that benefit the customers of Cardlytics' bank partners.

Cardlytics has access to anonymous transactions for more than 120 million accounts across the United States and the United Kingdom. That requires a lot of storage — now close to 6 petabytes of storage across the entire

organization — and considerable computing power. To meet the snowballing IT demands, Cardlytics turned to Dell EMC.

A cost-effective solution for fast service deployment

At first, Director of IT Biju Samuel and his team looked at the traditional approach of buying network gear, the computing tier and the storage tier as separate components. However, it was crucial to be able to scale rapidly, and they wanted to offer a hosted option to banks, so the team chose Dell EMC XC630 and XC730xd Web-Scale Converged Appliances. The Dell EMC XC Series runs on Nutanix™ Acropolis and Prism software and includes Dell EMC PowerEdge servers powered by the Intel® Xeon® processor E5 family. The solution has given Cardlytics an agile hosting platform for its analytics and the ability to deploy services to new customers in days rather than weeks — and at a less expensive price point. "Going with the three-tier solution would actually have cost about 50 percent more," Samuel says.

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> Biju Samuel,
> Director of IT, Cardlytics

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Although cost-effectiveness was not the primary factor for choosing Dell EMC's solution, the scale and speed of adding to the platforms make the system a great deal for the company. "The initial cost of the Dell EMC XC Series was in line with its competitors," Samuel says. "But what we found is that it's a lot more economical and faster to create additional nodes, and over the long run, I believe it's going to be a more cost-effective and easier-to-grow solution than what we have today."

Getting to market quickly

A big advantage of moving to the Dell EMC XC Series was the speed with which Cardlytics was able to implement the new platforms. "Other vendors that we looked at were telling us it would take two, three, four weeks — some even saying 45 to 60 days — to get equipment in-house and operational," Samuel says. "We didn't have that kind of time." Dell EMC guaranteed delivery of the equipment in seven to 10 days. In fact, the first pieces of hardware arrived within three days, according to Samuel. By the fourth day, a Dell EMC technician was on-site to help build out the company's first setup. The rest of the equipment arrived four days later. Within a week and a half, Cardlytics had its full system — software and hardware — up and running.

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Storage performance when it counts

Dell EMC XC Series also uses a combination of flash technology and spinning disks, coupled with advanced storage tiering technology to provide a high level of performance and scalability. Because Cardlytics is in the business of indexing, searching and analyzing millions of transactions daily, that flexibility comes in handy. "The flexibility that the Dell EMC XC Series gives us is that we can build it out customized to the way that we need it," Samuel says. "The storage is built into the server. So we have built it out with four flash drives and 20 spinning drives. The tiering capability allows the cold storage to ooze off into the spinning disks."

Dell EMC's hyper-converged option marries the storage and computing tiers so that Cardlytics can add volume more quickly and easily and get better performance. "It's like a mini data center in a box," says Samuel. "You're not managing a heterogeneous compute and storage network. It's actually an all-in-one unit." Cardlytics has taken advantage of the solution to achieve about 45,000 IOPS per node. With its current 10-node configuration, the company can reach about half a million IOPS, making it easier and faster to access and analyze vast data stores.

Scalability and ease of management with a unified view

Cardlytics has been using the Dell EMC XC Series to scale solutions horizontally rather than vertically. Bray says, "We love its scalability. Instead of adding a whole stack of servers to set up a new bank partner in the system, we can actually add one or two servers and horizontally scale solutions faster and more economically. We love the security aspect of the software and the manageability as well."

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The Nutanix Prism interface of the Dell EMC XC Series hyper-converged platform provides a "single pane of glass" through which Samuel and his team can view their systems' performance and be more proactive in anticipating and responding to customer needs. Samuel says, "Part of why we chose the XC Series was getting the Nutanix Prism software, which gave us that unified view to monitor and maintain our environment."

In addition, Cardlytics gains "out-of-band management" with the integrated Dell EMC Remote Access Controller (iDRAC) with Lifecycle Controller, which is embedded in every PowerEdge server with Intel Xeon processors. With iDRAC, the company can access servers even when they are not connected to the network. "We can connect directly through iDRAC with Lifecycle Controller to identify any issues," Samuel says. "And OpenManage Essentials integrates with SupportAssist, which automatically creates cases if, for example, there's an issue with a hard drive or node. Dell EMC proactively monitors our network and our devices, and they give us a much better response time compared to other providers, thanks to Dell EMC ProSupport."

Having that support, combined with the Dell EMC XC Series' hyper-converged architecture, has significantly reduced the burden on the company's small IT staff, freeing them up to pursue other innovative solutions that will ultimately drive more revenue for Cardlytics.

Helping Cardlytics be future ready

As Cardlytics plans for the future, time is of the essence. Bray says, "In our efforts to be future ready, the Dell EMC XC Series is helping to increase our speed-to-market, which is a big thing for us. Our bank partners love a solution that allows them to get up and running fast, and ahead of the competition." Adds Samuel, "We like Dell EMC because Dell EMC is forward-thinking like us. You can see that they have their eye on the future and are looking to how they can provide the best of everything to their customers."

Intel Inside®. Powerful Productivity Outside.

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