Lytics takes targeted marketing to new levels with Google N2D instances powered by AMD

AMD EPYC™ CPU-powered Google Cloud Platform instances increase margins and enable new business.

AMD EPYC

CUSTOMER

lytics

INDUSTRY

Customer data platform for personalized marketing

CHALLENGES

Improve efficiency to deliver higher margins

SOLUTION

Switch to AMD EPYC™ CPU-powered Google Cloud Platform N2D instances

RESULTS

13 percent reduction in costs, 14-20 percent better performance

AMD TECHNOLOGY AT A GLANCE

Google Cloud Platform N2D-standard-16 instances powered by AMD EPYC processors

TECHNOLOGY PARTNER

Google Cloud

Interpreting customer data for targeted marketing has become increasingly sophisticated, making extensive use of both compute and storage. Lytics has been a leading company in this arena since 2012 and is constantly in need of improving efficiency on its platforms to maintain a competitive edge. AMD EPYC™ CPU-powered Google Cloud Platform instances, proved to be the perfect way for Lytics to take the company's efficiency to the next level, opening new possibilities for expansion.

The challenge of increasing efficiency

"We're an orchestration tool for marketing technology," explains Sean Browning, VP of Partnerships at Lytics. "We've got a couple of engines. One is an identity resolution engine, so we know who the person is. This includes things like email addresses, social media profiles, Google identifiers, phone numbers and other customer IDs. We also have an affinity engine to understand what someone is looking at or what their interests are, be it content, or product, or otherwise. We find patterns in the data to personalize the marketing conversation."

"The N2D instances powered by AMD EPYC™ CPUs are really helping platform margins."

Kathyrn Gruenefeldt, VP of Engineering at Lytics

Lytics has been successfully providing this function in the consumer packaged-goods market, as well as media and entertainment, but wants to expand further into finance and healthcare. The company delivers its platform via the cloud and has been making increasing use of AI and machine learning. "The number one challenge we've always faced is the efficiency of the system," says Eric Sniff, Engineering Manager Platform Team at Lytics. "We need to deliver our engines with low costs. We migrated from another cloud platform six years ago to Google specifically to reduce costs."

"The disk costs were significantly less expensive with Google, which is very important to us as a data company," continues Sniff. "Google performed better than our previous provider at the time, so not only did we get lower cost virtual machines per byte and per core, but we also got improved performance."

This deployment consisted of Google Cloud Platform N1 instances. However, Lytics's pursuit of efficiency continued, and this led the company to AMD EPYC CPU-powered instances.

"When N2D instances were first released one of my engineers, noticed they were less expensive per core than the N1 instances. At the time we were doing a big initiative to lower our costs," explains Sniff. We did some initial testing and found that not only were they more cost-effective per core, but in some standard testing, they were 30 percent faster as well."

Lytics did a three-way test of its existing Intel-based Google Cloud Platform N1 instances against N2 instances and the AMD-based N2D instances in May 2020. "We moved to a staging environment and ran some load tests against our own product," says Sniff. "We were testing Elasticsearch, and these workloads are very CPU-intensive. That is what convinced us to make the final move. From seeing them in release notes to running some tests a month later, we started working on a plan to switch to N2Ds at that point."

Performance gains and a competitive edge with cost-efficient AMD EPYC CPUs

Lytics began to shift its workloads over to 16-core N2D-standard-16 instances in a staged, methodical process. Google provided a lot of assistance, particularly with contracts. "We worked a lot with Google on a migration plan," says Sniff. "Google allowed us to break the committed use discount contracts with the N1s, which are multiple year, to start a new contract for the N2Ds. It was just awesome on their part to have that flexibility." Google also helped considerably when there was a delay in chip shipments for the expected N2D rollout. "For a couple of months, we were half on N1s and half on N2Ds. Every morning a Google engineer would let us know when new cores became available so we could migrate over. Google covered the cost difference because of the interruption due to the chip shipment delay."

Eventually the entire Lytics fleet of 530 instances running its Elasticsearch-based platform had been migrated to N2D. "The instance cost is 13 percent lower for an N2D versus an N1," says Sniff. "We also saw a 14 to 20 percent performance increase initially during the conversion, so that's at least a 14 percent increase in efficiency. The N2Ds come with increased memory over the N1s, which helps. Together, that's a huge reduction in cost for greater ability."

"The N2D instances featuring AMD EPYC CPUs are really helping platform margins," adds Kathyrn Gruenefeldt, VP of Engineering at Lytics. "Looking at the cost to support a customer, if we can bring our costs down, we can pass this on to them. We want to make sure that we've got competitive pricing and having lower platform costs allows us to do this."

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Eric Sniff, Engineering Manager Platform Team at Lytics

"The conversion was super easy," continues Sniff. "We spun up new nodes into the Elasticsearch cluster on N2Ds and then drained the old nodes. Because of the lower cost, it has given us more freedom to be more aggressive about scaling up and down as we need to for workloads. It has given us more breathing room on the backend."

"I don't know why you would ever not get N2D instances powered by AMD. There is no disadvantage, there are only advantages in both efficiency and cost. It makes no sense to ever look at any other instance type."

Eric Sniff, Engineering Manager Platform Team at Lytics

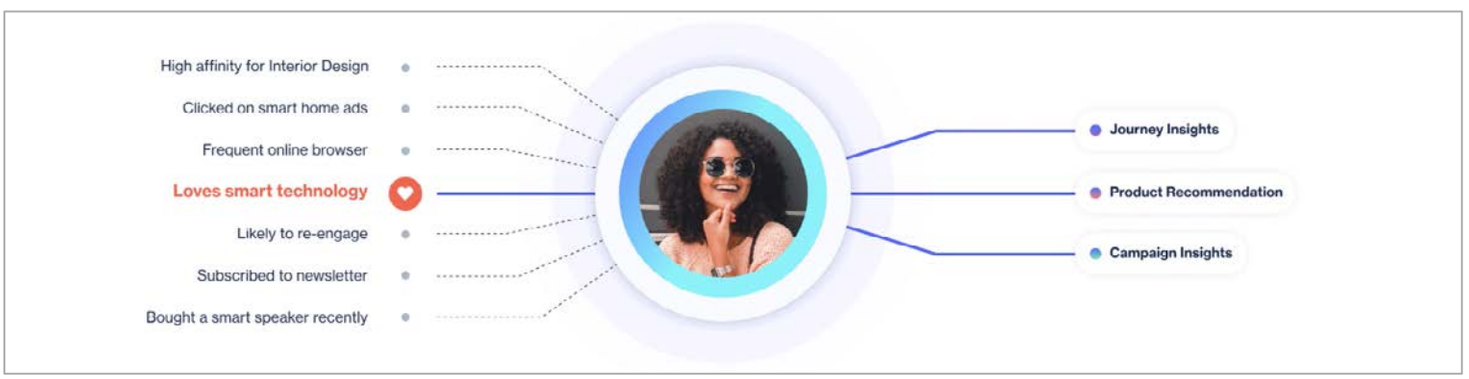
Enabling pilots and security for new customers

The N2D instances are providing greater flexibility to pursue new customers. "Sometimes customers are interested in trying before they buy," says Browning. "We now have the capacity to do more pilots, to prove Lytics' capabilities. We run more pilots because of this efficiency, and we close more deals. For example, we just secured a large financial services organization."

Lytics is also hoping that the strong security features of AMD EPYC processors will help with this kind of client. "We are investigating the confidential VMs, which use the security built into the AMD EPYC processors where we can encrypt the memory," says Sniff. "That adds another selling point to our customers and would be of interest to healthcare customers as well." Gruenefeldt adds, "We always need to think about how to stay competitive, and the efficiency of the platform that we're running on is a huge factor in that. Outside of labor, it is our most expensive monthly cost. We're excited about the prospects of confidential VMs, potentially giving us another avenue for pursuing financial and healthcare customers."

Running the Lytics Elasticsearch deployment on N2D instances powered by AMD EPYC CPUs is just the beginning of the transformation the company has planned. "The next phase of this migration is to convert our Kubernetes cluster over," says Sniff. "That will be about 40 nodes with 64 cores each."

"I'm super happy that Google is always looking to save us money and with this partnership, they were able to make an offering that saves us a lot," concludes Sniff. "I don't know why you would ever not get the N2D instances powered by AMD. There is no disadvantage, there are only advantages in both efficiency and cost. It makes no sense to ever look at any other instance type."



About Lytics

Lytics is a company based in Portland, Oregon, which helps marketers create meaningful customer journeys. The Lytics customer data platform enables marketers to build personalized digital experiences and 1-to-1 marketing campaigns by focusing on behavioral data and combining it with Lytics' advanced data science and machine learning decision engine. In a world where brands need to compete with Amazon, Netflix, and Spotify, Lytics helps them thrive. For more information visit lytics.com.

About Google Cloud

Google Cloud Platform is a suite of cloud computing services from Google for developing, deploying, and operating applications on the Internet. It is based on the same computing infrastructure as Google uses for its own internal applications. It provides a set of management tools and modular cloud services for computing, data storage, data analytics and machine learning. Google Cloud Platform earned over $13 billion in revenue in 2020, placing it in the top three cloud services globally. For more information visit cloud.google.com.

About AMD

For over 50 years AMD has driven innovation in high-performance computing, graphics, and visualization technologies—the building blocks for gaming, immersive platforms, and the data center. Hundreds of millions of consumers, leading Fortune 500 businesses, and cutting-edge scientific research facilities around the world rely on AMD technology daily to improve how they live, work, and play. AMD employees around the world are focused on building great products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit amd.com/EPYC.

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