

TEAM VELOCITY ENHANCES AUTO DEALER WEBSITE SECURITY AND RELIABILITY WITH AMD

CASE STUDY

Team Velocity deployed Confidential GKE nodes powered by AMD EPYC™ Server CPUs for secure, high-performance automotive dealer websites with four-nines uptime



Automotive sales at today's dealerships often start online and lead to the showroom floor. Their marketing and customer relations require dependable websites linked to stock inventory and customer data. Dealers need high-performing, secure, reliable service from these websites, and Team Velocity has built an enviable reputation delivering this. The company found Confidential Google Kubernetes Engine (GKE) nodes advanced by AMD EPYC™ Server CPUs provided the performance and security its customers demanded.

“Bulletproof performance is a must.”

PJ Champion, VP of Devops, Team Velocity

“Team Velocity is a dealer-centric company,” says PJ Champion, VP of Devops, Team Velocity. “We host primary dealership websites through a CDN, such as Fastly or Akamai, and then the underlying hosting of the platform is on GKE. This provides front-facing inventory and email marketing campaigns. We process about 10 billion web requests a month.”

This is a lot of monthly traffic, but spikes in demand present the greatest challenge. “For websites, one of the hardest things is handling requests per second (RPS),” continues Champion. “We’ve spiked between 30 to 40,000 RPS. But we normally average between 3 to 4,000 RPS to our websites.” This high-throughput web traffic on GKE is primarily through database servers, which need to run on very performant CPUs. The software Team Velocity uses to deliver these services includes Kestrel, .net core, Redis, Elasticsearch, and Microsoft SQL (MSSQL).

AMD EPYC SERVER CPUS ENABLE CONFIDENTIAL COMPUTING IN GKE

“Bulletproof performance is a must,” explains Champion. Team Velocity takes the reliability of its websites very seriously. “For the last two years, we’ve maintained over four nines of uptime, 99.995%. We aggressively solve problems and seek vendors that have the same mentality of solid infrastructure. If it’s not dependable, we’re not going to use it.”

Team Velocity became interested in AMD EPYC server processors when it needed to combine leading performance with additional security. “AMD EPYC Server CPUs delivered top-tier performance with Confidential Computing support in GKE,” says Champion. “Some of our customers started inquiring about hardware-based, memory-type protection and encryption. Confidential Computing was the way to accomplish that for our most sensitive workloads.”

“AMD EPYC Server CPUs delivered top-tier performance with Confidential Computing support in GKE.”

PJ Champion, VP of Devops, Team Velocity

INDUSTRY

Automotive retail

CHALLENGES

Handling massive web traffic spikes, maintaining four-nines uptime, ensuring strong security, and delivering fast, reliable dealer websites at scale

SOLUTION

Google Confidential GKE nodes advanced by 3rd Gen AMD EPYC™ Server CPUs, with 5th Gen AMD EPYC Server CPUs being tested for future rollout

RESULTS

99.995% uptime, 50% more traffic per CPU, faster performance, reduced licensing costs, and stronger security for dealer websites

AMD TECHNOLOGY AT A GLANCE

3rd Gen AMD EPYC™ Server CPUs
5th Gen AMD EPYC™ Server CPUs

TECHNOLOGY PARTNER





AMD EPYC Server CPUs help Team Velocity deliver automotive dealership websites securely.

“In 2026, there is no edge case for security anymore,” argues Champion. “You can never do too much to block bad actors. You don’t ever want to draw a line in the sand and say you’ve done enough. We’re not a checkbox company, so whatever we can do to protect our dealers, our data, and our infrastructure, we’re going to do.” When you’re handling sensitive customer information, including financial data, there can be no compromises.

FASTER, MORE SECURE WEBSITES WITH AMD EPYC SERVER CPUs

Team Velocity looks for transparent communication, clear escalation paths in the case of issues, and no downtime from its infrastructure providers. As a Google Cloud Platform partner, the company wanted to achieve this through GKE nodes. AMD EPYC Server CPUs offer SEV, a sophisticated, hardware-based confidential computing solution. AMD SEV includes Secure Nested Paging, a feature that enables strong memory integrity protection and attestation. Through GKE these options are bundled inside the Confidential Computing option. Enabling this capability was straightforward. “From a Kubernetes perspective, when you use the Google platform you simply select Confidential GKE nodes, and then you get a list of instance types that are available to you,” says Champion. “The one that we use currently is called C2D, powered by 3rd Gen AMD EPYC Server CPUs. When we built that cluster, a year and a half ago, this was the fastest available processor type and easy to implement.”

“The C2D GKE nodes powered by AMD EPYC processors are 50% faster than N2, enabling around 50% more website traffic volume per CPU.”

PJ Champion, VP of Devops, Team Velocity

The switch to Confidential GKE nodes wasn’t driven by any risk that Team Velocity had experienced, but rather a desire to offer more to its customers. “We weren’t worried about security, but we always strive to be better,” says Champion. “We tested a use case by doing a deployment in our development environment to ensure that it was performant, highly available, and reliable. Then we deployed across our environments. We migrated from

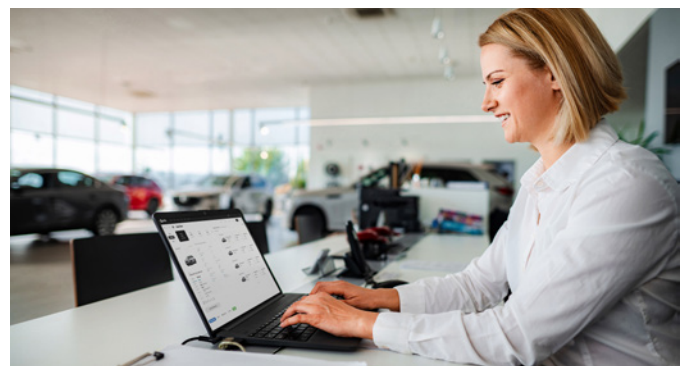
our previous N2 nodes at the time to C2D. Because the encryption happens at memory level, performance didn’t take a hit. In fact, we found that the CPUs were faster. The transition to AMD EPYC Server CPUs was completely seamless.”

This has had an entirely positive impact on Team Velocity’s business. “It’s peace of mind for our customers,” says Champion. “We could also use fewer processors to cover the workloads because they’re faster.” By switching to C2D, Team Velocity found its cloud infrastructure could support higher website traffic volume. “The C2D GKE nodes powered by AMD EPYC processors are 50% faster than N2, enabling around 50% more website traffic volume per CPU. This extra performance reduces the number of MSSQL licenses we need, allowing us to make our footprint more efficient.”

AMD DELIVERS GKE NODES YOU CAN RELY ON

Now 100% of Team Velocity’s GKE workloads run on C2D nodes advanced by AMD EPYC server CPUs. “All our critical, sensitive applications run in C2D,” says Champion. “Reliability is our number one concern, and we trust these VMs powered by AMD EPYC CPUs to be reliable. What we can’t withstand is websites going down. The proof is in the SLA with four nines uptime percentage at the end of the year. That is thanks both to the instance types that we’ve chosen and the platform that we’ve deployed them on. Without a stateless hosting platform like Kubernetes, alongside dependable nodes powered by AMD EPYC Server CPUs, we wouldn’t be able to obtain those uptimes.”

Team Velocity has deployed a variety of C2D instances. “For our production environment, we have around 150 c2d-standard-8 VMs, plus around 20 c2d-highcpu-32,” says Champion. “We have 10 c2d-standard-56 instances, too.” The company plans to optimize its use of Confidential GKE nodes in the future and is already exploring newer generations. “We will always have a need to protect sensitive workloads with the highest security standards. We want more performant CPUs to further reduce our need for MSSQL licensing.”



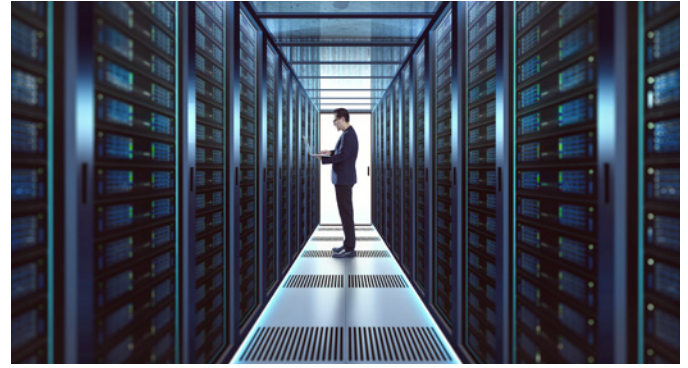
Team Velocity’s marketing platform powered by AMD EPYC Server CPUs delivers tens of thousands of customer requests per second.

Currently, the latest C4D instances advanced by 5th Gen AMD EPYC Server CPUs are being tested in the Team Velocity development environment. “We’re aiming to roll out C4D in the second quarter of 2026.”

“You can absolutely depend on Confidential GKE nodes powered by AMD EPYC Server CPUs.”

PJ Champion, VP of Devops, Team Velocity

“We always need more performance,” says Champion. “We constantly chase the best webpage speed. You must have the quickest web response time to make the sales. You can absolutely depend on Confidential GKE nodes powered by AMD EPYC Server CPUs. The proof is in the results. Team Velocity has maintained an extremely high uptime on its websites, backed by AMD processors. We hold all our vendors to extremely high standards. Over the years, AMD has proven its platform to be one that you can put your trust in. We couldn’t be happier with our current AMD deployment, and we’re very much looking forward to the next generation.”



The hardware security features of AMD EPYC Server CPUs empower Google Cloud Confidential instances for Team Velocity.



WANT TO LEARN HOW AMD EPYC PROCESSORS MIGHT WORK FOR YOU?

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ABOUT TEAM VELOCITY

Team Velocity, part of Data Driven Holdings, is a technology-driven partner for automotive dealerships, delivering the Apollo Customer Experience Platform to unify websites, marketing, advertising and retention. Serving 76+ top U.S. dealers and 23 manufacturers, Team Velocity’s 250+ automotive specialists empower dealers to sell and service more vehicles with personalized, integrated digital experiences. The company is focused on dealer growth and seamless customer journeys. For more information visit teamvelocitymarketing.com.

ABOUT AMD

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