AMD | STORIES

DELIVERING EXCEPTIONAL PERFORMANCE WITH AMD EPYC™

Hivelocity's mission is to provide the ultimate cloud services experience through exceptional customer service, flawless reliability and extraordinary innovation.

PARTNER

HIVELOCITY

INDUSTRY

Dedicated Server & Cloud Hosting.

CHALLENGES

Provide hosting clients with high powered yet cost effective solution for resource-intensive data storage, processing and serving needs.

SOLUTION

Deploy AMD EPYC-based Tyan servers for clients with data storage and database server requirements

RESULTS

AMD EPYC servers are a game changer. With a single AMD EPYC processor the Hivelocity client is experiencing read/write speeds six times faster than that of two Xeon processors
With resource-rich EPYC, Hivelocity can deliver performance and capacity to its clients with less hardware and reduced power costs.

AMD TECHNOLOGY AT A GLANCE

AMD EPYC 7000 series processors with up to 32 cores

Delivering great performance with exceptional value is critical to success in the highly competitive dedicated server hosting market.

Hivelocity, a leading provider in the cloud hosting space, has grown from running a handful of servers to managing more than 15,000 physical and virtual servers in five data centers that support clients with operations in more than 135 countries. This incredible growth was accomplished by ensuring its clients always have the affordable power and performance they need to grow their own businesses. Hivelocity determined that AMD EPYC is a critical next step for them to extend their tradition of excellence.

"We serve clients of all sizes, from those with minimal compute requirements to major enterprise customers who need resources at scale," said Steve Eschweiler, COO at Hivelocity. Hivelocity's clients store and process increasing amounts of data feeding their business analytics and artificial intelligence activities. These clients are making increasingly tough performance demands on servers across multiple areas, including throughput to storage to read/write speeds. That is why Hivelocity turned to AMD's EPYC processor for its new high capacity storage service.

"Our AMD EPYC processor-powered Tyan servers have truly blown away our price/performance expectations"

Steve Eschweiler, COO , Hivelocity

"AMD EPYC servers are a game changer," Eschweiler said. "With AMD EPYC-based servers, we've tested out NVMe reads at 1900 Mbps and writes at 1200Mbps. Those speeds are five to six times what we've seen in the Intel® systems. That's a tremendous value proposition for anyone who needs data storage, data processing, or a database server, and wants to eliminate bottlenecks with their read/writes. We intend to offer this to any client who needs high-performance storage and who needs speed."

UNSURPASSED SPEED AND POWER FOR NEW APPS

One such Hivelocity client operates a private cloud that offers an artificial intelligence (AI) analytics application to Fortune 100 companies. The client was running dual Xeon® processors—and running into performance issues. Its resource-intensive application required great speed between processor and memory and NVMe drive reads/writes. The Xeon boxes were at 100% capacity and pegging out. This poor server performance significantly constrained storage access and affected quality of service to the client's end customers.

That's when Hivelocity recommended a Tyan server equipped with a single socket, 16-core AMD EPYC 7351P processor.

Now, Eschweiler said, with a single AMD EPYC processor the Hivelocity client is experiencing read/write speeds six times faster than that of two Xeon processors. Further, Hivelocity's client is getting those speeds using only 10% of the capacity of the single EPYC processor.

"In other words, it went from dual sockets that were maxed out to a single socket that now has significant capacity to spare," said Eschweiler. "AMD EPYC eliminates bottleneck concerns with its performance from CPU to memory, CPU to hard drive with the number of PCIe lanes it offers. If any of our clients tell us they need speed, they need IOPS, we'd point them toward the AMD EPYC and know they will have the features and performance they need with great reliability. With AMD EPYC, they have built in headroom for future growth."

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EPYC POWERS BUSINESS GROWTH

In the short term, EPYC has enabled the Hivelocity client to gain the processing power it required to expand its cloud-based analytics and AI application to a new Fortune 100 customer, simultaneously avoiding the capital expense of three or more Xeon processors necessary with the Intel-based servers. "Saving thousands of dollars is vital for a growing business," Eschweiler noted.

AMD EPYC processors will also help Hivelocity achieve its own price/performance goals, reducing both capital and operating expenses so the company can continue offering

highly competitive value propositions to its clients along with greater system resource capabilities. Every EPYC processor, whether it has 8, 16, 24, or 32 cores, comes with all processing and security features fully enabled. The full feature set is available no matter the core count, and there are no additional fees for unlocking these features. With these resource-rich processors in its data centers, Hivelocity can deliver performance and capacity to its clients with less hardware and reduced power costs. Hivelocity's colocation clients save money by getting more performance with fewer servers and so avoid additional rack and physical space fees with easy and seamless integration of AMD EPYC servers into their current management stack.

Customer support will also be easier with AMD EPYC servers. Hivelocity provides 24/365 support for its clients. Eschweiler said troubleshooting EPYC servers is easier because his staff knows that with EPYC, the issue cannot be from a bottleneck in the hardware. "We know that the speed of EPYC and its processing resources means it will be tough for our clients to outgrow its capacity," Eschweiler said. "So that's a phone call we won't get."

The Hivelocity team is expanding its facilities into new regions, including New York and the southwestern U.S. "As we continue to expand our operations, we intend to make AMD part of our growth plans," Eschweiler said, projecting that Hivelocity could deploy 4,000-plus AMD EPYC-based servers over the next twelve months. Some of those servers could be used for virtualization.

Hivelocity is all about serving its customers. "We want to provide solutions that will perform to and beyond our clients' expectations," said Eschweiler. "AMD EPYCs won't be slow, ever, from what we've seen, so the Hivelocity experience will be great for our customers."

TYAN Transport SX (TN70A-B8026) powered by AMD Epyc™ processor

ABOUT HIVELOCITY

Hivelocity was founded in 2002 with the mission to provide the ultimate user experience through exceptional customer service, flawless reliability and extraordinary innovation. From a single rack of servers, it has grown to operating 5 world-class data centers totaling over 70,000 square feet across Florida, Georgia and California. The company maintains and manages more than 15,000 physical and virtualized servers and provides managed solutions on dedicated servers, virtual servers and private cloud. Each of its data centers is SSAE-16 SOC1 and SOC2 certified with HIPAA and PCI compliant services also available. Hivelocity is privately held and currently employs 70 of the brightest technicians, engineers and programmers in the business.

ABOUT AMD

For more than 45 years AMD has driven innovation in high performance computing, graphics, and visualization technologies— the building blocks for gaming, immersive platforms, and the datacenter. 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 www.amd.com/epyc.