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# AMD Showcases Continued Enterprise Data Center Momentum with EPYC CPUs and Pensando DPUs

## AMD strengthens longstanding relationship with VMware with highly efficient, performant solutions for virtualized and distributed environments

SANTA CLARA, Calif., Aug. 21, 2023 (GLOBE NEWSWIRE) -- Today, at VMware Explore 2023 Las Vegas, AMD (NASDAQ: AMD) continued to showcase its proven performance and growing adoption of AMD EPYC™ CPUs, AMD Pensando™ data processing units (DPUs) and adaptive computing products as ideal solutions for the most efficient and innovative virtualized environments. For instance, a system powered by a 4th Gen AMD EPYC™ 9654 CPUs and a Pensando DPU, delivers approximately 3.3x the Redis application performance and 1.75x the aggregate network throughput when compared to a 4th Gen EPYC system with standard NICs[1]. Additionally, servers with 2P 4th Gen EPYC 9654 CPUs alone can enable using up to 35% fewer servers in an environment running 2000 virtual machines (VMs) compared to 2P Intel® Xeon® 8490H based servers[2].

"AMD is helping enterprise customers fully realize the benefits of their virtualized data centers with the latest generation EPYC CPUs and Pensando DPUs," said Forrest Norrod, executive vice president and general manager, Data Center Solutions Business Group, AMD. "Consolidation and modernization enable businesses to increase server utilization and efficiency while delivering impressive performance for critical enterprise workloads. Our ongoing collaboration with VMware enables customers to get more efficient and agile to reach their digital transformation goals."

**AMD is the Ideal Partner for Virtualized Environments**
AMD, along with an ecosystem of trusted partners, continues to bring enterprise solutions to market that enable greater data center consolidation, helping customers be prepared for future workloads and capabilities of their data center. At the core of this shift is the impressive performance of AMD EPYC CPUs delivering, for instance, a 1.7x performance increase with 2P EPYC 9654 CPUs when compared to 2P Intel® Xeon® 8490H based servers running VMmark®[3].

Additionally, as data center applications continue to grow in scale and complexity, AMD Pensando DPUs are the ideal solution to help offload infrastructure services from the CPU to free up valuable work cycles. VMware vSphere® 8-enabled systems, powered by AMD EPYC CPUs and Pensando DPUs, deliver the performance, efficiency and flexibility IT leaders need to run a broad set of business-critical workloads.

“The move toward heterogeneous computing is driven, in large part, by the increased complexity of modern enterprise applications and distributed environments,” said Krish Prasad, senior vice president and general manager, cloud infrastructure business group, VMware. “VMware vSphere support for the latest generation of AMD EPYC CPUs and Pensando DPUs gives our customers a comprehensive enterprise platform that helps to deliver improved infrastructure performance, security and manageability.”

AMD data center products, along with the latest VMware-based systems, help IT leaders tailor and drastically improve the management and security of their enterprise applications allowing them to deliver on their organization’s most demanding digital transformation goals.

VMware Explore features several speaking sessions led by AMD executives. CVP of Architecture and Strategy, Robert Hormuth will lead a session on meeting AI demand in a constrained data center on Wednesday, August 23 at 2:00 p.m. PDT and AMD Technical Marketing Director, Nick Furman, will lead a session on revolutionizing the hybrid cloud with DPUs on Wednesday, August 23 at 12:00 p.m. PDT.

**Supporting Resources**

- Visit the AMD booth (#701) at VMware Explore 2023 to speak to an expert
- Learn more about AMD EPYC processors
- Learn more about AMD Pensando Infrastructure Accelerators
- Follow AMD on Twitter
- Connect with AMD on LinkedIn

**About AMD**
For more than 50 years AMD has driven innovation in high-performance computing, graphics and visualization technologies. Billions of people, leading Fortune 500 businesses and cutting-edge scientific research institutions around the world rely on AMD technology daily to improve how they live, work and play. AMD employees are focused on building leadership high-performance and adaptive products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit the AMD (NASDAQ: AMD) website, blog, LinkedIn and Twitter pages.

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[1] PEN-002: Testing conducted by AMD Performance Labs as of May, 10 2023 across 24 VMs with 8 Redis instances per VM in Uniform Pass Through mode to offload VMware NSC network services on the AMD Pensando 100Gb/s DPU on a production system comprising

with 1P AMD EPYC 9654 96-Core processors and 768GB of DDR5 memory running at 4800MT/s with VMware ESXi and NSX with DPU offload in EDP-Standard mode. VMs were running Ubuntu 22.0.4 , memtier_benchmark version 1.4.0, iperf version 3.1.3, and redis-server version 7.0.11 compiled with the zenver3 flag. PC manufacturers may vary configurations, yielding different results.

[2] SP5TCO-036A: As of 05/19/2023 based on AMD Internal analysis using the AMD EPYC™ Server Virtualization & Greenhouse Gas Emission TCO Estimation Tool - version 12.15 estimating the cost and quantity of 2P AMD 96 core EPYC™ 9654 powered server versus 2P Intel® Xeon® 60 core Platinum 8490H based server solutions required to deliver 2000 total virtual machines (VM), requiring 1 core and 8GB of memory per VM for a 3-year period. This includes VMware software license cost of $6,558.32 per socket + one additional software for every 32 CPU core increment in that socket. This scenario contains many assumptions and estimates and, while based on AMD internal research and best approximations, should be considered an example for information purposes only, and not used as a basis for decision making over actual testing. For additional details, see https://www.amd.com/en/claims/epyc4#SP5TCO-036A.

[3] SP5-049C: VMmark® 3.1.1 matched pair comparison based on published results as of 6/13/2023. Configurations: 2-node, 2P 96-core EPYC 9654 powered server running VMware ESXi 8.0b (40.66 @ 42 tiles/798 VMs, https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/vmmark/2023-06-13-Lenovo-ThinkSystem-SR665V3.pdf) versus 2-node, 2P 60-core Xeon Platinum 8490H running VMware ESXi 8.0 GA (23.38 @ 23 tiles/437 VMs, https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/vmmark/2023-03-21-Fujitsu-PRIMERGY-RX2540M7.pdf) for 1.74x the score and 1.75x the tile (VM) capacity. 2-node, 2P EPYC 7763-powered server (23.33 @ 24 tiles/456 VMs, https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/vmmark/2022-02-08-Fujitsu-RX2450M1.pdf) shown at 0.98x performance for reference. VMmark is a registered trademark of VMware in the US or other countries.



Source: Advanced Micro Devices, Inc.