5 REASONS WHY AMD EPYC™ CPUs MATTER FOR HCI

AT A GLANCE

Make the most of HCI (hyperconverged infrastructure) with AMD EPYC™ Processors. Leverage their density, fast performance, advanced security features, easy integration and efficiencies to achieve your business goals. AMD maintains strong relationships with leading software and hardware providers to integrate new innovations and deliver optimized solutions that help take servers, storage and networking power to the next level.

1

ACHIEVE MORE, FASTER

Accelerate virtualized applications

Keep business running fast with world-record performance.[1] 3rd Generation AMD EPYC™ Processors can deliver 2.8x more VMware vSAN™ performance than a comparable competitive offering,[2] a crucial benchmark for HCI performance.

2

ADDRESS FUNDAMENTAL DATA AND PRIVACY RISKS SIMPLY

Help protect data with advanced protection capabilities

Help guard critical data with hardware-based security features available in AMD EPYC™ processors. Isolate each virtual desktop to help defend it from many outside and internal threats.[3]

3

FIND NEW EFFICIENCIES FOR SAVINGS

Help reduce data center CapEX and OpEX costs

3rd Gen AMD EPYC™ Processors can reduce total cost of ownership (TCO) by up to 35% over four years.[4] More cores enable more virtual desktop sessions per server, helping you save on data center space, energy and cooling.

4

CREATE FAST AND FLEXIBLE DEPLOYMENTS

Right-size your processing power

3rd Generation AMD EPYC™ CPUs power no-compromise, two-socket servers that can perform at competitive four-socket server levels.[5] PCIe®4, more throughput capacity, and significant memory bandwidth lets you do more with less.

5

ENABLE NEW CAPABILITIES FOR YOUR BUSINESS

Optimize your current and future data center investment

AMD EPYC™ processors are optimized for the leading HCI solutions and software. Our long-term product roadmap can help you keep your IT investment on the path of continuous innovation.

Continue reading for more technical detail

TECHNICAL DEEP DIVE

#1 ACHIEVE MORE, FASTER

- Using the same total number of cores in a server solution, an AMD EPYC™ 7713 processor delivers 3x additional tiles (VM workload capacity) than an Intel® Xeon® Platinum 8268 processor[2]
- AMD EPYC™ 7763 processor enables 2.1x more VDI sessions on Login VSI™ Pro v4.140.1 vs. an Intel XEON Gold 6258R.[6] Get up to 46% more "knowledge worker" desktop sessions per core with the AMD EPYC™ 7543 processor vs. the competition.[7]

#2 ADDRESS FUNDAMENTAL DATA AND PRIVACY RISKS SIMPLY

- AMD EPYC™ Processors are the only x86 server processors with Secure Encrypted Virtualization (SEV).
- SEV encrypts and isolates VMs with unique encryption keys known only to the processor.
- SEV-ES (Encrypted State) provides additional confidentiality and integrity layers for data in use.
- 3rd Generation AMD EPYC™ Processors' SEV-Secure Nested Paging (SEV-SNP) adds strong memory integrity protection capabilities to help prevent malicious hypervisor-based attacks like data replay, memory re-mapping, and more in order to create an isolated execution environment.
- AMD Infinity Guard provides a modern multi-faceted approach to data center security with virtually zero impact on performance.[3]

#3 FIND NEW EFFICIENCIES FOR SAVINGS

- AMD EPYC™ with Nutanix™ can support up to ~450 VDI desktops on one 2x AMD EPYC™ 7742 processor-based server.[8]
- To support 1000 virtual desktop sessions, approximately 10 servers are required using two Intel® Xeon® Gold 5220 processors (36C) and only approximately five servers powered with two AMD EPYC™ 7F72 processors (48C), helping reduce three-year TCO by up to ~37%.[9]
- A 4-host, two-socket server powered by AMD EPYC™ 7713 Processors delivers 2.8x the VMmark® 3.1.1 vSAN™ performance of a 4-host, two-socket Intel® Xeon® Gold 6252–based server.[2]

#4 CREATE FAST AND FLEXIBLE DEPLOYMENTS

- AMD EPYC™ processors help you optimize your data center by changing the way you should think about servers. Traditional thinking is that you need a 2- or 4-socket server to attain necessary resources and scalability.
- With its "All-In Feature Set," AMD EPYC processor-based solutions help you right-size the computing power for your business and satisfy your workload requirements without compromise in a 1- or 2-socket server.
- Single-socket servers powered by AMD EPYC™ deliver can dual-socket competitive performance and feature set in a single CPU that help provide increased power efficiency, reduced latency, lower infrastructure costs and higher compute density.[10]
- Dual-socket servers powered by AMD EPYC™ can efficiently power the most demanding workloads with support for up to 128 cores, 4 TB of memory, and up to 160 PCIe® 4 I/O lanes.

#5 ENABLE NEW CAPABILITIES FOR YOUR BUSINESS

- AMD has strong technology partnerships with major HCI solution providers including Dell, HPE and Lenovo.
- AMD EPYC™ is certified for VMware®, Nutanix™, Microsoft® Azure Stack HCI and SimpliVity.

LEARN MORE AT AMD.COM/EPYC

1 For a complete list of world records see http://amd.com/worldrecords.
2 See https://www.amd.com/en/claims/epyc#faq-MLN-064A
3 AMD Infinity Guard features vary by EPYC™ Processor generations. Infinity Guard security features must be enabled by server OEMs and/or Cloud Service Providers to operate. Check with your OEM or provider to confirm support of these features. Learn more about Infinity Guard at https://www.amd.com/en/technologies/infinity-guard. GD-183
4 See https://www.amd.com/en/claims/epyc#faq-MLNTCO-001
5 See https://www.amd.com/en/claims/epyc#faq-MLN-068
6 See https://www.amd.com/en/claims/epyc#faq-MLN-004
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