

# 5 REASONS WHY AMD EPYC™ PROCESSORS ARE THE RIGHT CHOICE ACROSS DATABASE WORKLOADS

## AT A GLANCE

Break through data bottlenecks and master database transformation with the power of AMD EPYC™ processors. Get the fast performance, advanced security features, flexibility, and operational efficiencies you need to succeed.

AMD maintains strong relationships with leading software and hardware providers to integrate new innovations and deliver optimized solutions that help take servers, storage, and database power to the next level.

## 1 **ACHIEVE MORE, FASTER, ACROSS DATABASE WORKLOADS**

### **Boost your business with accelerated data**

Keep your business running fast with world-record performance for greater flexibility in performant database hosting. AMD EPYC processors hold 9 [world records](#) in OLTP performance and performance per dollar across 1CPU/2CPU configurations on Microsoft® SQL Server and other widely deployed RDBMS software.\*

## 2 **CREATE FAST AND FLEXIBLE DEPLOYMENTS**

### **Right-size your processing power and hosting model to hit performance goals**

AMD EPYC processors enable consistent results whether on premises or in the cloud, with database optimized instances available from major cloud providers. In your data center, 4th and 5th Gen AMD EPYC processors can power no-compromise, single- and dual-socket servers with leadership performance across critical data workloads.

## 3 **ADDRESS FUNDAMENTAL DATA AND PRIVACY RISKS SIMPLY**

### **Help protect stakeholders with advanced security features**

Add protective shielding to databases hosted in virtual and cloud environments without having to add costs or code. AMD Infinity Guard, a hardware-based set of advanced security features available in AMD EPYC processors, isolates each virtual host to help defend it from many outside and internal threats.<sup>1</sup>

## 4 **MAXIMIZE YOUR INVESTMENT**

### **Help reduce data center cost, power, and space**

AMD EPYC processors can help reduce overall TCO through leadership energy efficiency capabilities. Help reduce overall cost, power consumption, and precious datacenter floor space with AMD EPYC CPUs featuring leadership energy efficiency and performance.

## 5 **STRONG ECOSYSTEM SUPPORT THAT ENABLES NEW CAPABILITIES FOR YOUR BUSINESS**

### **Optimize your current deployment and data center investments**

AMD EPYC processors are optimized for leading relational database management solutions. The AMD execution record and long-term product roadmap can help you keep your IT investment on the path of continuous data ingestion, transformation, and innovation.

## #1 Achieve more, faster, across multiple workloads

AMD EPYC CPUs deliver leadership performance to accelerate transactions and help reduce query turnaround times.

- Up to **31% more per-core performance** on 1P 96C EPYC 9654 compared to 2P 60C Intel Xeon 8490H on TPC-E for MS SQL Server®. [SP5-148](#)
- Up to **42% more transaction-per-minute** and up to **23% better perf-per-dollar** on the cloud comparing select AWS m7a EPYC instances to AWS m7i Xeon instances on MySQL running the TPROC-C benchmark. <sup>2</sup>

## #2 Create fast and flexible deployments

AMD EPYC processors are compatible out of the box with major x86 application vendors whether on premises or hosted by one of the major cloud providers.

- Get started quickly with database-ready cloud instances including AWS m7a/m6a/r7a/r6a, Microsoft Azure E/D av5/av6/lasv3 instances, or any of the **more than 950 instances available across all the major cloud vendors**.
- On premises, 4th and 5th Gen AMD EPYC processor feature in **more than 350 platforms across all the major OEMs** (Dell/HPE/Lenovo/Supermicro/Cisco) with both single-socket and dual-socket options.

## #3 Address fundamental data and privacy risks simply

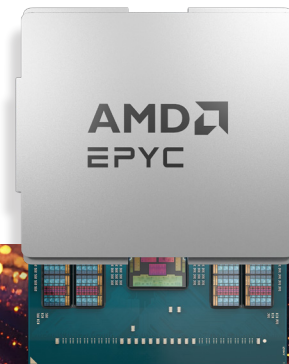
- AMD Infinity Guard provides a modern multi-faceted approach to data center security helping protect your data with zero code change.
- AMD EPYC is also featured as part of the confidential computing instances at leading cloud providers, providing a solution that helps secure data assets on the cloud.

## #4 Maximize your investment

- A dual-socket AMD EPYC 9754-powered server, to deliver 20,000 units of integer performance, takes an estimated **39% fewer servers**, **~29% less power** and has a **~33% lower 3-year TCO** than a dualsocket Intel Xeon Platinum 8592+-powered server. [SP5TCO-072](#)
- And the 5th Generation AMD EPYC 9965 solution takes an estimated **62% fewer servers**, **~45% less power** and **~44% lower 3-year TCO** compared to dual socket Intel Xeon Platinum 8592+ powered server. [SP9xxTCO-002A](#)

## #5 Strong ecosystem support enables new capabilities for your business

- AMD EPYC processors are compatible with leading database solutions like Microsoft SQL Server®, MySQL™, Oracle Database, Cloudera®, Apache Spark®, Databricks, MongoDB®, Hadoop®, MariaDB®, IBM DB2, and PostgreSQL®.
- Upgrade to AMD with confidence using a strong set of AMD tools that facilitate your solution evaluation, migration and optimization. Start your journey by perusing AMD EPYC processor Tuning Guides at: [AMD Documentation Hub](#)



\* As of December 2024

1 - GD-183A: AMD Infinity Guard features vary by EPYC™ processor generations and /or series. 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>  
2 - <https://www.amd.com/content/dam/amd/en/documents/epyc-business-docs/performance-briefs/epyc-9004-pb-aws-m7a-vs-m7i.pdf>

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