

Choose Dell EMC PowerEdge servers powered by 3rd Gen AMD EPYC processors for better performance on multiple workloads

In three different studies, we tested Dell EMC PowerEdge server configurations with 3rd Gen AMD EPYC processors and with 2nd Gen AMD EPYC processors to see what kind of performance benefits your organization could expect from the newer hardware

Analyze data faster

During tests with the Spark-Bench benchmark, a Dell EMC™ PowerEdge™ R6525 server with 3rd Gen AMD EPYC™ 75F3 processors took less time to complete a k-means clustering workload targeting an Apache Spark database, achieving a higher processing rate vs. the same server with 2nd Gen AMD EPYC 7542 processors.



Dell EMC PowerEdge R6525

Time to complete a data analytics workload on an 811GB dataset (hours, lower is better)



Analyze data in 28.5% less time



Handle up to 40% more data per hour

Data processing rate (MB/hour, higher is better)

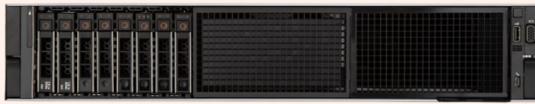


Learn more at <http://facts.pt/RRQ3nvZ>

Process more frames per second

In a VMware® environment with Tanzu Kubernetes Grid (TKG), we ran an image preprocessing workload similar to what an organization might use at the start of a machine learning (ML) workflow. With both Dell EMC PowerEdge R7525 cluster configurations backed by a Dell EMC PowerStore 5000T array, the cluster with 3rd Gen AMD EPYC 7543 processors processed images in less time than the one with 2nd Gen AMD EPYC 7532 processors, achieving a higher rate of frames per second.

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Time to complete a containerized image processing workload in a VMware Tanzu environment (minutes:seconds, lower is better)

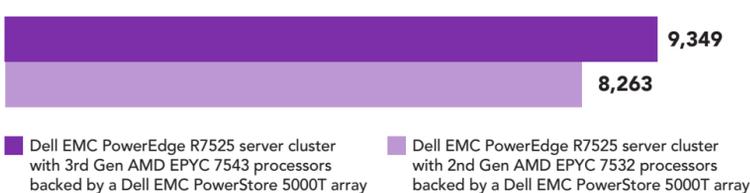


Prepare over 19K images for ML in 13.9% less time



Handle 13.1% more frames per second

Image processing rate (frames per second, higher is better)



Learn more at <http://facts.pt/ObCtwcb>

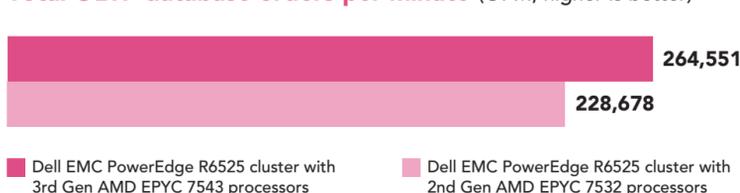
Handle more transactions

Compared to a cluster of the same servers with 2nd Gen AMD EPYC 7532 processors, a Dell EMC PowerEdge R6525 server cluster powered by 3rd Gen AMD EPYC 7543 processors handled more orders per minute (OPM) in an online transactional processing (OLTP) database workload with Microsoft SQL Server 2019.



Dell EMC PowerEdge R6525

Total OLTP database orders per minute (OPM, higher is better)



Process 15.6% more orders per minute

Learn more at <http://facts.pt/QbC85Z3>

+PLUS Get the benefits of confidential compute with minimal performance impact

When we tested a Dell EMC PowerEdge R6525 server with AMD EPYC 7543 processors, we found that it delivered similar OLTP performance with and without AMD Secure Encrypted Virtualization - Encrypted State (SEV-ES) and AMD Secure Memory Encryption (SME) enabled. With just a 1.7% difference in OPM, you could enjoy comparable performance while securing and encrypting data in use in your virtualized environment.

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Learn more at <http://facts.pt/zFbVc8z>