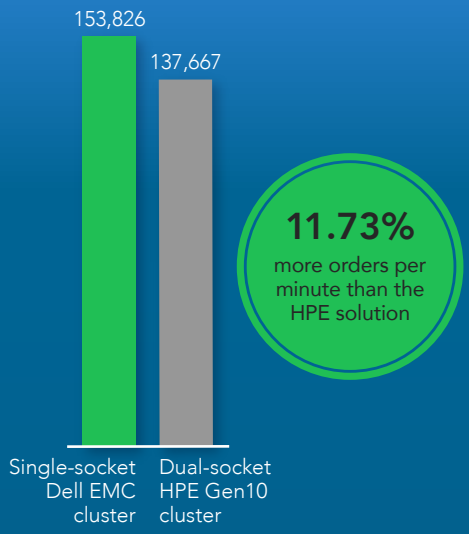
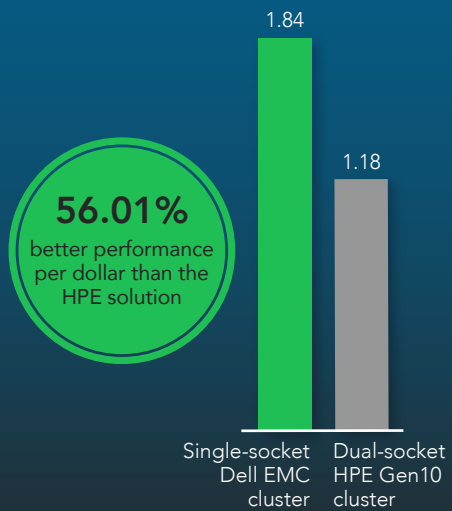
Executive summary

Greater OLTP workload performance



Greater OLTP performance for each dollar spent on hardware and software



*For more details on our data, read the full report.

Get stronger SQL Server performance for less with Dell EMC PowerEdge R6515 servers powered by AMD EPYC 7502P processors

On an OLTP workload in a virtualized environment, a cluster of these single-socket servers outperformed a cluster of higher-priced dual-socket HPE ProLiant DL360 Gen10 servers powered by Intel Xeon Gold 6242 processors

We compared the online transactional processing (OLTP) database performance of three server clusters: One with current Dell EMC™ hardware, another with current HPE hardware, and a third, baseline cluster that used legacy HPE hardware. Both current clusters outperformed the legacy cluster, with the current Dell EMC cluster executing 11.73 percent more orders per minute (OPM) than the current HPE cluster.

We also compared the hardware cost of the two current clusters. The current Dell EMC cluster's hardware cost 28.38 percent less than that of the current HPE cluster. Taking performance and hardware cost into account, we found that the current Dell EMC cluster had a 56.01 percent better performance-to-cost ratio than the current HPE cluster.

Each cluster contained three nodes, ran Microsoft Hyper-V, and hosted Microsoft SQL Server 2019 virtual machines. The current Dell EMC cluster used single-socket PowerEdge™ R6515 servers, each powered by an AMD EPYC™ 7502P processor. The current HPE cluster used dual-socket ProLiant DL360 Gen10 servers, each with two Intel® Xeon® Gold 6242 processors. The legacy HPE cluster used five-year-old dual-socket ProLiant DL360 Gen9 servers.

Our findings

We compared two current-generation clusters:

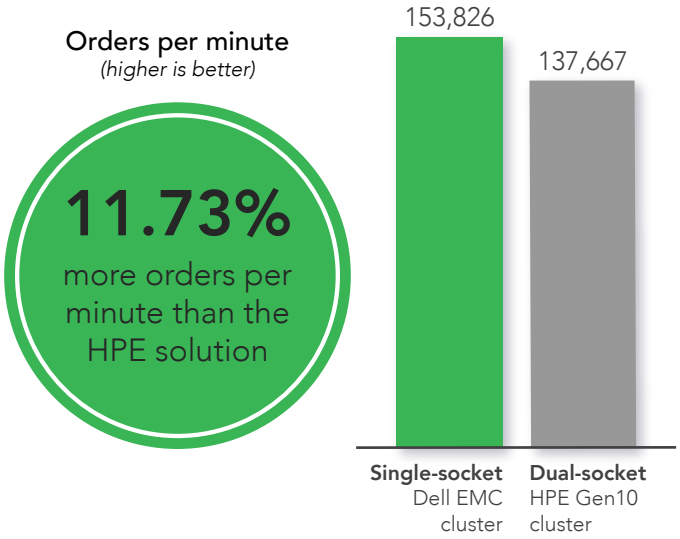
Dell EMC cluster (3 servers)

- Single-socket Dell EMC PowerEdge R6515 server
- AMD EPYC 7502P processor

HPE cluster (3 servers)

- Dual-socket HPE ProLiant DL360 Gen10 server
- Intel Xeon Gold 6242 processors

As a baseline, we also tested a legacy SQL Server cluster equipped with three five-year-old dual-socket HPE ProLiant DL360 Gen9 servers powered by Intel Xeon E5-2680 v3 processors. Each cluster ran Microsoft Hyper-V and hosted Microsoft SQL Server 2019 virtual machines.



Performance

In DVD Store 3 benchmark tests, the single-socket Dell EMC PowerEdge R6515 cluster delivered 11.73 percent more average orders per minute than the dual-socket HPE ProLiant DL360 Gen10 cluster. The Dell EMC solution also dramatically outperformed the legacy cluster, delivering more than 1.8 times the average number of orders per minute. For more information on our performance testing, see the full report.

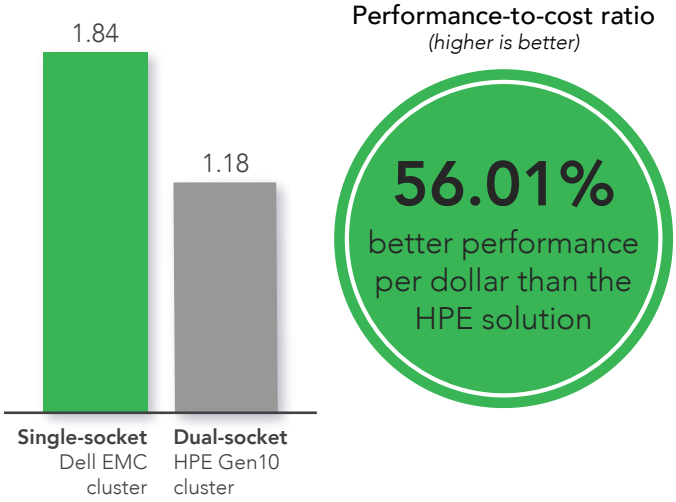
Hardware costs

A company would save $33,019.89 by investing in the Dell EMC PowerEdge R6515 server cluster we tested instead of the HPE ProLiant DL360 Gen10 server cluster. The table below shows the cost of each solution.

	Dell EMC cluster	HPE cluster
Hardware	$83,329.11[1]	$116,349.00[2]

Value

We found that the Dell EMC cluster offered a better value than the HPE cluster in terms of performance vs. hardware costs, achieving 11.73 percent greater performance at a lower hardware price. The graph below shows that the Dell EMC cluster offered a 56.01 percent higher performance-to-cost ratio than the HPE cluster (1.84 compared to 1.18).



Read the report at http://facts.pt/4y6a2ty ▶

1 Pricing for the Dell EMC PowerEdge R6515 came from the Dell EMC website on November 27, 2019. Note that pricing does not include discounts, tax, or shipping. https://www.dell.com/en-us/work/shop/productdetailstxn/poweredge-r6515

2 Pricing for the HPE ProLiant DL360 Gen10 came from a quote we received from an HPE Platinum partner on December 3, 2019. The quote did not include discounts, tax, or shipping.

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