

Cloud Service Providers Need Performance and Value to Meet Customer Demands

Dell™ PowerEdge™ R650xs servers balance performance and value for medium-duty virtualization workloads.

Research Abstract

Executive Summary

Tier-2 and tier-3 cloud service providers (CSPs) and other small and medium-sized businesses (SMBs) need servers that can strike a balance between meeting medium-duty virtualization and transactional workload demands and costs.

Customers come to tier-2 and tier-3 CSPs for lower costs and more individualized customer service. Smaller-size and specialty cloud players make up a crucial part of the cloud ecosystem by being closer to their customers and better knowing and accommodating their needs. However, hardware selection is intimately tied up with CSPs' strategies for controlling costs while meeting their customers' needs. Not only must server hardware be efficient in terms of both virtual machine (VM) density and power draw, but it must also be available at a price point at which CSPs can viably refresh their hardware as necessary.

Testing by Prowess Consulting of Dell™ PowerEdge™ R650xs and HPE® ProLiant® DL360 Gen10 Plus servers—servers from the top hardware vendors aimed at virtualization—revealed significant price and performance advantages for the Dell Technologies™ offering. In addition, our analysis uncovered additional qualitative benefits provided by Dell's direct-sales business model: faster, easier purchasing and fulfillment coupled with more straightforward support and returns.

Dell™ PowerEdge™ R650xs servers powered by 3rd Generation Intel® Xeon® Scalable processors are optimized for virtualization workloads:

- Dell PowerEdge R650xs servers are available with processors with up to 32 cores, the maximum number of cores supported by VMware vSphere® without additional licenses.
- 16 DIMM slots can support sufficient memory for VMs so that virtualization workloads can fully utilize all of the threads available from the processors, while only requiring a more cost-effective motherboard for the server.
- Dell PowerEdge R650xs servers are designed to meet specific requirements for medium-duty virtualization workloads with enterprise-class performance and capabilities.



Price

We configured the Dell PowerEdge R650xs and HPE ProLiant DL360 Gen10 Plus servers as identically as possible. Nevertheless, the Dell PowerEdge R650xs server cost 12 percent less. In addition, being able to directly purchase the Dell PowerEdge R650xs server on Dell.com saved time and resulted in a faster projected fulfillment time.

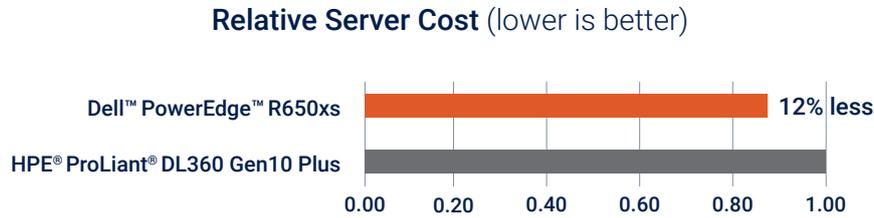


Figure 1. Relative cost of acquisition of servers evaluated in this study

12 percent lower cost translates into a savings of more than \$250,000 when buying 200 Dell™ PowerEdge™ R650xs servers.

Performance

Beyond pricing, the Dell PowerEdge R650xs server differentiated itself from the HPE ProLiant DL360 Gen10 Plus server with 2.12x higher performance using out-of-the-box system profile settings. We tested the performance of the servers using the MySQL® HammerDB online transaction processing (OLTP) benchmark.

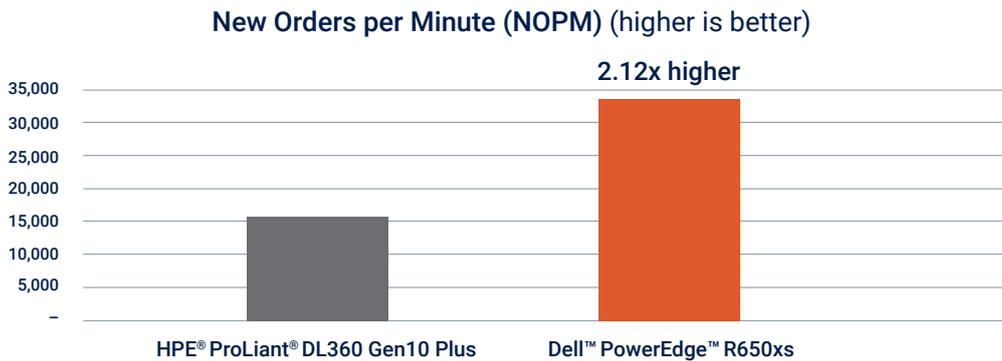


Figure 2. HammerDB results on MySQL® transactional-processing performance of servers evaluated as measured in new orders per minute (NOPM)

Learn More

Get the full story by reading our paper, "<https://www.prowesscorp.com/project/dell-servers-outperform-hpe-price-performance/>."

For more information about the Dell PowerEdge R650xs server, visit: www.dell.com/en-us/shop/productdetailstxn/poweredge-r650xs/



The analysis in this document was done by Prowess Consulting and commissioned by Dell Technologies. Prowess and the Prowess logo are trademarks of Prowess Consulting, LLC. Copyright © 2022 Prowess Consulting, LLC. All rights reserved. Other trademarks are the property of their respective owners.