HPE owns 2-socket Windows leadership with HPE ProLiant DL385 Gen11 and 4th Gen AMD EPYC processors

Key takeaways

HPE ProLiant DL385 Gen11 results for two-socket servers:

- **Best 2P performance on Microsoft Windows[1]**
- **Excellent generation-to-generation scalability with 78% more SAP SD users and 79% more SAPS**

Configurations

HPE ProLiant DL385 Gen11 server

2 processors / 192 cores / 384 threads; AMD EPYC 9654 @ 2.4 GHz processors; memory 1.5 TB memory; Microsoft Windows Server 2022 Datacenter Edition; Microsoft SQL Server 2019; SAP enhancement package 5 for SAP ERP 6.0

Results

104,000 SAP SD users

574,020 SAPS

Certification #2022027

HPE ProLiant DL385 Gen10 Plus v2 server

2 processors / 128 cores / 256 threads; AMD EPYC 7763 @ 2.45 GHz processors; 1.5 TB memory; Microsoft Windows Server 2019; Microsoft SQL Server 2017; SAP enhancement package 5 for SAP ERP 6.0

Results

58,300 SAP SD users

320,080 SAPS

Certification #2021022

All results are valid as of November 10, 2022. See SAP benchmarks for further details.

[1] Claim based on comparison with the next top 2P Windows results. See Top 2P Windows results for more details.

World record on two-tier SAP® Sales and Distribution (SD) Standard Application Benchmark

Executive summary

The HPE ProLiant DL385 Gen11 server achieved a 2P Windows world record on the two-tier SAP SD Standard Application Benchmark with results of 104,000 SAP SD users and 574,020 SAPS. Configured with 4th Gen AMD EPYC™ processors, the result also showed a delta of 79% for SAP SD users and 78% more SAPS when compared to the previous generation, HPE ProLiant DL385 Gen10 Plus v2 server, and AMD EPYC processors as shown in Figure 1.

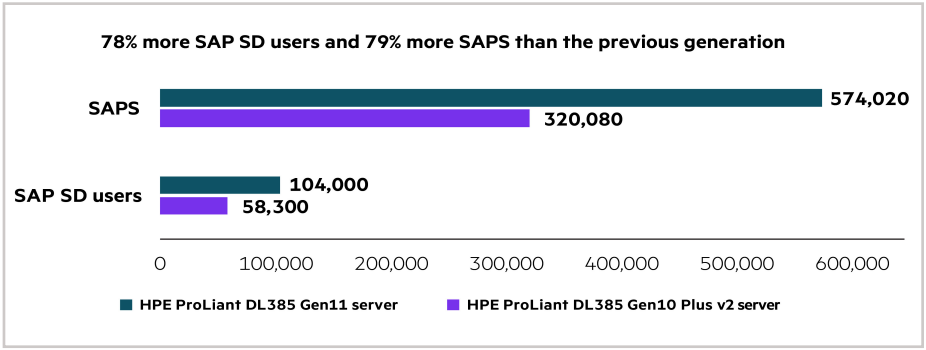

Figure 1. HPE ProLiant DL385 Gen11 server shows significantly more SAP SD users and SAPS than the previous generation HPE ProLiant DL385 Gen10 Plus v2 server

Introducing HPE ProLiant Gen11: Compute engineered for your hybrid world

Intuitive | Trusted | Optimized

Customer value with HPE

HPE ProLiant Gen11 servers

HPE ProLiant Gen11 servers include 4th Gen AMD EPYC processors, DDR5 memory, M.2 high availability boot device, Enterprise and Data Center SSD Form Factor (EDSFF) NVMe drives, smart cooling modules, and HPE iLO 6 embedded management.

HPE security—HPE enhanced its leading cloud platform with an innovative compute foundation that can unify and modernize data everywhere, from the edge to the cloud. At the silicon level, HPE security technological innovations continuously provide zero trust architecture against more advanced persistent security threats. Through HPE iLO 6 verification in HPE ProLiant Gen11 servers, new security features include platform certificates iDevID by default with server-integrated Trusted Platform Module (TPM). In addition, HPE Server Security Optimized Service for HPE ProLiant has extended its supply chain security leadership to more than 150 countries.

About the SAP benchmark

The SAP SD Standard Application Benchmark is an enterprise resource planning (ERP) benchmark that tests online order and invoice transaction processing (OLTP).

HPE GreenLake

HPE GreenLake for Compute Ops Management (COM) Standard tier license is integrated HPE ProLiant completes the hybrid environment wherever it lives—spanning edge to cloud—with a cloud operating experience, built-in security, and optimized workload performance to drive the business forward.

HPE ProLiant DL385 Gen11 server

The secure and flexible 2P, 2U HPE ProLiant DL385 Gen11 server delivers advanced performance for Big Data applications such as machine learning and deep learning.

Bottom line

This benchmark performance record is a proof point for the leadership capability of the new HPE ProLiant Gen11 servers. HPE continues to be on the cutting edge by designing products that stand the test of time with innovations that are ahead of their time.

Learn more at

HPE ProLiant DL385 Gen11 documents

HPE server performance briefs

a50007466ENW

Hewlett Packard Enterprise

Hewlett Packard Enterprise

Performance brief

Check if the document is available in the language of your choice.

NEW HPE PROLIANT DL385 GEN10 PLUS V2 IS THE BEST AMD-BASED SERVER FOR VIRTUALIZATION!

VMmark 3.1.1 records achieved with 3rd Gen AMD EPYC™ processors

Key takeaways

- **#1 AMD result**
- **#1 4-node result**
- **#1 2P 4-node result**
- **39.45% more performance and 28.57% more tiles compared to 2P 4-node results with previous generation processors**
- **12.53% more performance and 20% more tiles than previous 4-node record**
- **With only half the total CPUs, defeats Fujitsu PRIMERGY by 1.63% higher performance score**

HPE ProLiant DL385 Gen10 Plus v2 configuration

HPE ProLiant 385 Gen10 Plus v2 with AMD EPYC 7763 2.45 GHz processors, 32 x 64 GB DDR4 RDIMMs at 3200 MT/s

- 4 nodes/2 sockets, 8 processors/512 cores/ 1024 threads
- Primary storage: HPE 3PAR 9450 – 4 nodes, 64 x HPE 3PAR 9000 920 GB SAS SFF SSDs, 27 LUNs (RAID 6)

About the VMmark benchmark

VMmark 3.1.1 generates a realistic measure of platform performance by incorporating a variety of platform-level workloads such as shared nothing migration, virtual machine migration, clone and deploy, and snapshotting. Source: vmware.com/

VMmark disclosures are available at vmware.com/products/vmmark/results3x.html. The competitive benchmark claims are based on being the best 4-node, 2P 4-node, and AMD result on the VMmark 3.1.1 benchmark, with a score of 33.58 @ 36 tiles. Results published as of March 15, 2021.

EXECUTIVE SUMMARY

The HPE ProLiant DL385 Gen10 Plus v2 server delivered the #1 4-node, #1 2P 4-node, and #1 AMD result on the VMmark 3.1.1 benchmark. The server scored 33.58 @ 36 tiles with two AMD EPYC™ 7763 processors per node, and was configured HPE 3PAR StoreServ 9450. The server's #1 4-node result achieved a gain of 12.53% in performance and 20% in number of tiles over the previous record, and defeated a 2nd Generation Intel® Xeon® Scalable Processor-based competitor that used twice as many processors by 1.63% in performance. The server also defeated the prior 2P 4-node record by 39.45%.

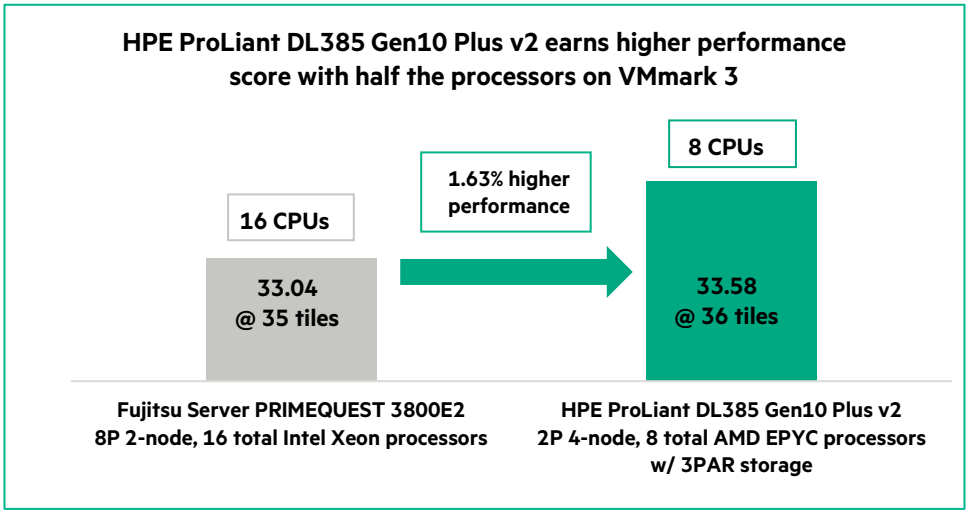

FIGURE 1. HPE ProLiant DL385 Gen10 Plus v2 8P and competitor 16P results on the VMmark 3.1.1 benchmark

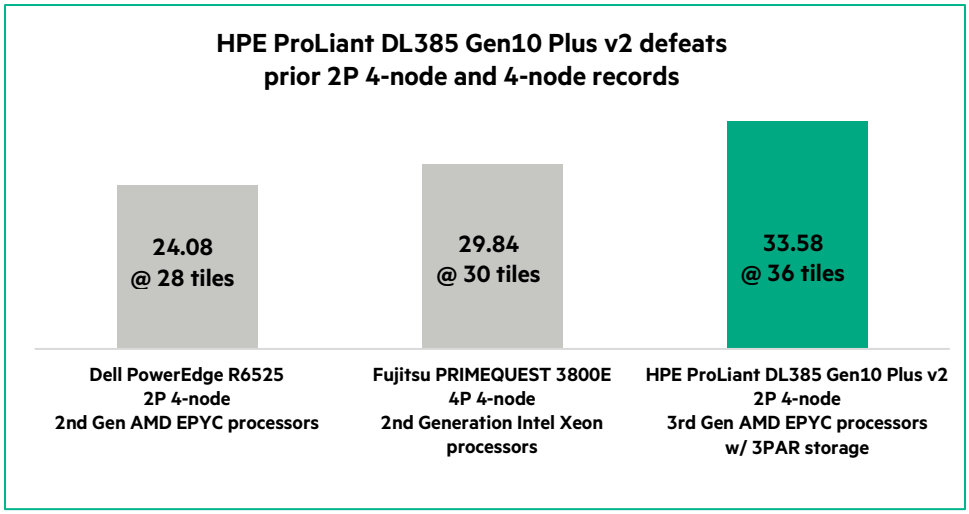

FIGURE 2. HPE ProLiant DL385 Gen10 Plus v2 versus prior top 2P 4-node and 4-node results

CUSTOMER VALUE WITH HPE

HPE ProLiant DL385 Gen10 Plus v2: Accelerator-optimized solution for big data analytics. The secure and flexible 2P 2U HPE ProLiant DL385 Gen10 Plus v2 Server delivers advanced performance for big data applications like machine learning and deep learning. The server takes full advantage of the available compute to remove bottlenecks in memory and I/O, providing the right amount of compute to get the job done efficiently with up to 64 cores/CPU and 32 DIMMs. As a plus, your teams will be at ease with HPE silicon root of trust and AMD Secure Processor.

HPE 3PAR StoreServ 9450. HPE 3PAR StoreServ 9000 Storage helps customers consolidate primary storage workloads for file and block onto an enterprise-class flash array without compromising performance, scalability, data services, or resiliency. HPE 3PAR StoreServ 9000 Storage is based on the proven HPE 3PAR architecture and is purpose-built for al-flash consolidation. HPE has customers covered whether applications are virtualized, containerized, or traditional.

BOTTOM LINE

The HPE ProLiant DL385 Gen10 Plus v2 benchmark results indicate that the platform is a front-runner for virtualization. HPE goes the extra mile to fast-forward customer success.

LEARN MORE AT

HPE and AMD EPYC

HPE Marketing Documents Library

AMD World Records

Hewlett Packard Enterprise

a50003860enw, March 2021

HPE ProLiant DL385 Gen11 takes #1 performance result for TPC-H non-clustered 3000GB benchmark

4th Gen AMD EPYC™ processors help to reach 4 #1 records on decision-support workloads

Key takeaways

HPE ProLiant DL385 Gen11 results for two-socket servers @ 3000GB:

- **Overall best performance**
- **Best performance on Microsoft SQL Server 2022**
- **Best performance on Microsoft Windows Server 2022**
- **First TPC-H non-clustered with over 2M QphH**

Configuration

HPE ProLiant DL385 Gen11 servers:

2 sockets/128 cores/256 threads; AMD EPYC™ 9554 64C processors @ 3.1 GHz; 3000GB memory (24 x 128 GB DDR5 DIMMs); Microsoft Windows Server 2022; Microsoft SQL Server 2022

Availability date: 04/23/2023

Score

2,405,162.5 QphH @ 3000GB and $490.02 USD per kQphH @ 3000GB

www.tpc.org/3385

All results valid as of November 10, 2022.

About the TPC-H benchmark

The TPC-H is a decision support benchmark consisting of a suite of business-oriented ad-hoc queries and concurrent data modifications selected for broad relevance. This benchmark models decision support systems examining large volumes of data and executing complex queries.

Executive summary

The new HPE ProLiant DL385 Gen11 took four world records on the 3000GB TPC Benchmark™ H (TPC-H) benchmark. With 4th Gen AMD EPYC processors, the HPE ProLiant DL385 Gen11 scored 2,405,162.5 QphH @ 3000GB and $490.02 USD per kQphH @ 3000GB. In addition, HPE is the first to achieve over 2M QphH non-clustered benchmark across all scale factors.

Overall best performance	Best performance on Microsoft SQL Server 2022	First TPC-H non-clustered result with over 2M QphH across scale factors	Best performance on Microsoft Windows Server 2022

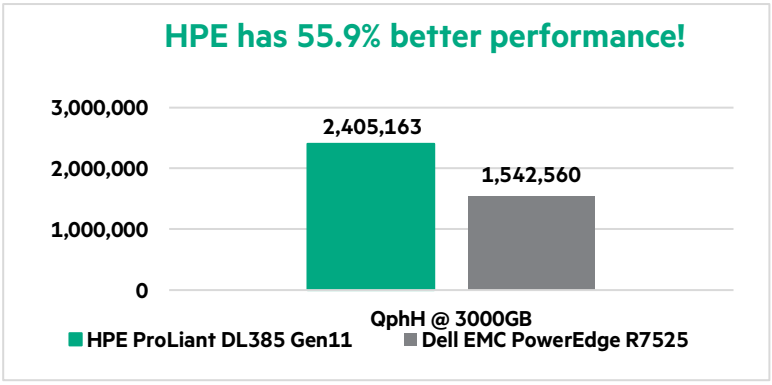

Figure 1. The HPE ProLiant DL385 Gen11 defeated the Dell EMC PowerEdge by 55.9% better performance on the TPC-H benchmark @ 3000GB scale factor.

Customer value with HPE

Introducing HPE ProLiant Gen 11:
Compute engineered for customers' hybrid world

Intuitive **Trusted** **Optimized**

ProLiant Gen11 servers

HPE ProLiant Gen11 servers include 4th Gen AMD EPYC processors, DDR5 memory, M.2 high availability boot device; PCIe Gen5 high-speed I/O, and Integrated Lights Out (iLO) 6 embedded management.

HPE Security. HPE enhanced its leading cloud platform with an innovative compute foundation that can unify and modernize data everywhere, from the edge to the cloud. At the silicon level,

Competitor configuration

Dell EMC PowerEdge R7525 server

2 sockets/64 cores/128 threads; AMD EPYC Milan 75F3 processors 2.95 GHz; 2 TB (16 x 128 GB DDR4 DIMMs); Red Hat 8.3 Enterprise Linux; Microsoft SQL Server 2022

Availability date: 07/05/21

Score

1,542,560 QphH @ 3000GB
See https://www.tpc.org/3380

Note: The TPC states that comparisons of TPC-H results measured against different database sizes are misleading and discourages such comparisons. All TPC-H results are grouped by database size to emphasize that only results within each group are comparable. This benchmark belongs to the 3000GB group and should be compared only to other benchmarks in this group.

HPE security technological innovations continuously provide zero-trust architecture against more advanced persistent security threats. Through iLO 6 verification in Gen11, new security features include platform certificates iDevID by default with server-integrated TPM. In addition, HPE Server Security Optimized Service for HPE ProLiant has extended its supply chain security leadership to more than 150 countries.

HPE GreenLake

HPE GreenLake for Compute Ops Management (COM) Standard tier license is integrated. HPE ProLiant Gen11 servers have the most innovative advances HPE has ever offered. HPE ProLiant completes the hybrid environment wherever it lives—spanning edge to cloud—with a cloud operating experience, built-in security, and optimized workload performance to drive business forward.

HPE ProLiant DL385 Gen 11

The secure and flexible 2P 2U HPE ProLiant DL385 Gen11 server delivers advanced performance for big data applications like machine learning and deep learning.

Bottom line

This benchmark performance record is a proof point for the leadership capability of the new HPE ProLiant Gen11 servers. HPE continues to be on the cutting edge by designing products that stand the test of time with innovations that are ahead of their time.

Learn more at

HPE ProLiant DL385 Gen11 Documents

HPE server performance briefs

a50007470enw, November 2022

New HPE ProLiant DL385 Gen11 achieves 5 world records for overall performance, price-performance

Leadership on TPC-H non-clustered @ 1000GB with 4th Gen AMD EPYC™ processors

Key takeaways

HPE ProLiant DL385 Gen11 results @ 1000GB:

- **Overall best performance**
- **Overall best price/performance**
- **Best performance on Microsoft SQL Server 2022**
- **Best performance on Microsoft Windows Server 2022**
- **First TPC-H non-clustered with over 1M QphH @ 1000GB**

Configuration

HPE ProLiant DL385 Gen11 servers:

2 processors/32 cores/64 threads; AMD EPYC™ 9174F processors @ 4.1 GHz; 768 GB memory (24 x 32 GB DDR5 DIMMs); Microsoft Windows Server 2022; Microsoft SQL Server 2022

Availability date: 12/05/22

Score

1,156,679 QphH @ 1000GB and $265.09 USD per kQphH @ 1000GB

tpc.org/3386

All results valid as of November 10, 2022.

About the TPC-H benchmark

The TPC-H is a decision support benchmark consisting of a suite of business-oriented ad-hoc queries and concurrent data modifications selected for broad relevance. This benchmark models decision support systems examining large volumes of data and executing complex queries.

Executive summary

With the new 4th Gen AMD EPYC processors, the HPE ProLiant DL385 Gen11 attained five world records on the TPC Benchmark™ H (TPC-H) 1000GB, including performance and price-performance. The server scored 1,156,627.9 QphH @ 1000GB and $265.09 USD per kQphH @ 1000GB on the decision-support workload benchmark. HPE is also the first to achieve over 1M QphH for non-clustered @ 1000GB scale servers.

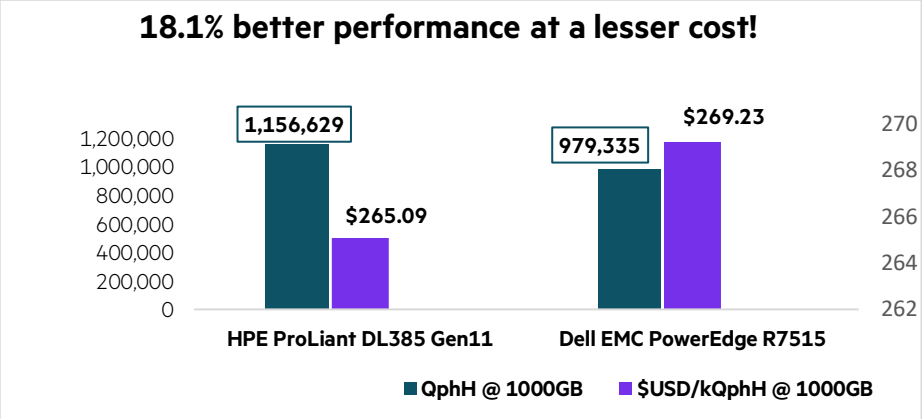

Figure 1. The HPE ProLiant DL385 Gen11 defeated the Dell EMC PowerEdge by 18.1% better performance and 1.54% better price/performance on the TPC-H benchmark @ 1000GB scale factor.

Customer value with HPE

Introducing HPE ProLiant Gen 11:
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ProLiant Gen11 servers

HPE ProLiant Gen11 servers include 4th generation AMD EPYC processors, DDR5 memory, M.2 high availability boot device, EDSFF NVMe drives, smart cooling modules, and Integrated Lights Out (iLO) 6 embedded management.

HPE Security. HPE enhanced its leading cloud platform with an innovative compute foundation that can unify and modernize data everywhere, from the edge to the cloud. At the silicon level,

Competitor configuration

Dell EMC PowerEdge R7515 server

1 socket/32 cores/64 threads; AMD EPYC Milan 75F3 processors 2.95 GHz; 1 TB (8 x 128 GB DDR4 DIMMs); Red Hat 8.3 Enterprise Linux; Microsoft SQL Server 2019

Availability date: 04/29/2021

Score

979,335 QphH @ 1000GB
$269.23 USD per kQphH @ 1000GB

See tpc.org/3374

Note: The TPC states that comparisons of TPC-H results measured against different database sizes are misleading and discourages such comparisons. All TPC-H results are grouped by database size to emphasize that only results within each group are comparable. This benchmark belongs to the 3000GB group and should be compared only to other benchmarks in this group.

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Bottom line

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Learn more at

HPE ProLiant DL385 Gen11 Documents

HPE server performance briefs

a50007469enw, November 2022

Virtualization leadership results for the new HPE ProLiant DL385 Gen11 with latest AMD EPYC processors

4-node, 2P performance world record on the VMmark 3.X benchmark

Key takeaways

HPE ProLiant DL385 Gen11

- **#1 VMmark 3.x core result with 256 total cores**
- **40% higher score and more 38% more tiles than Dell EMC PowerEdge R6525**
- **47% higher score and 50% more tiles than Fujitsu PRIMERGY RX2450 M1**

Configuration

HPE ProLiant DL385 Gen11

2 sockets/64 cores/128 threads; AMD EPYC™ 9374F processors 3.5-4.1 GHz; FC SAN storage; 1536 GB memory; VMware ESXi 8.0 IA, VMware vCenter 8.0 IA

VMmark 3.1.1 score

The competitive benchmark claims are based on having the highest total cores result, 256 cores, on the VMmark 3.x benchmark, with a score of 34.22 @ 36 tiles.

All results valid as of November 10, 2022.

About the VMmark benchmark

VMmark 3.1.1 generates a realistic measure of platform performance by incorporating a variety of platform-level workloads such as shared nothing migration, virtual machine migration, clone and deploy, and snapshotting. Source: vmware.com/.

Executive summary

With AMD EPYC™ 4th Gen processors, the HPE ProLiant DL385 Gen11 took the overall top 256 total core count result on the VMmark 3.X benchmark. The server attained the record virtualization performance result with a score of 34.22 @ 36 tiles, beating competitors' Dell EMC and Fujitsu results.

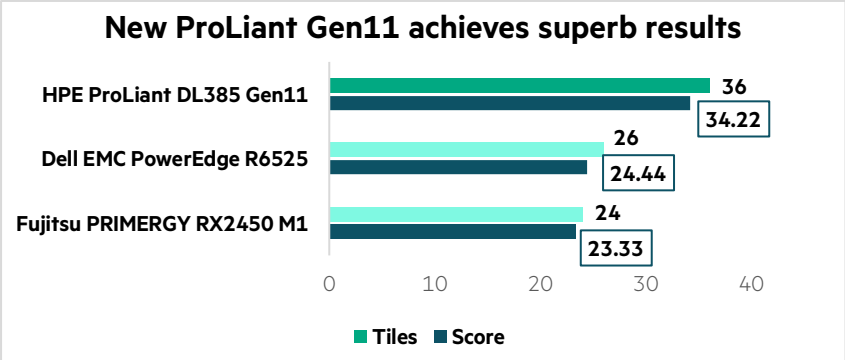

Figure1. The HPE ProLiant DL385 Gen11 beat the Dell EMC PowerEdge R6525 and Fujitsu PRIMERGY RX2450 M1 servers with excellent results in both score and tile categories for 4-node 2P servers.

40% higher performance and 38% more tiles than Dell EMC

47% higher performance and 50% more tiles than Fujitsu

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Competitor configurations

Dell EMC PowerEdge R6525

2 sockets/64 cores/128 threads; AMD EPYC 75F3 processors
2.95-4.0 GHz; vSAN storage;
2048 GB memory; VMware ESXi 7.0 U2a, VMware vCenter 7.0 U2

VMmark 3.1.1 score: 24.44 @ 2 tiles

Fujitsu PRIMERGY RX2450 M1

2 sockets/128 cores/256 threads; AMD EPYC 7763 processors
2.45-3.5 GHz; FC SAN storage;
2048 GB memory; VMware ESXi 7.0 U2a, VMware vCenter 7.0 U2

VMmark 3.1.1 score: 23.33 @ 24 tiles

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HPE server performance briefs

Make the right purchase decision.
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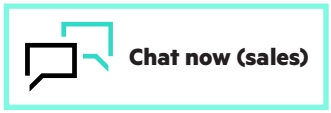

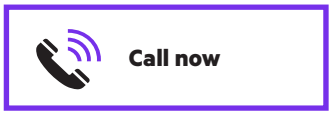

a50007468enw, November 2022