Executive summary

Dell EMC™ PowerEdge™ MX platform
powered by Intel® Xeon® Scalable processors*

up to
625,000
more orders per
minute**

up to
40%
more virtual
machines**

up to
55.9%
lower storage
latency**
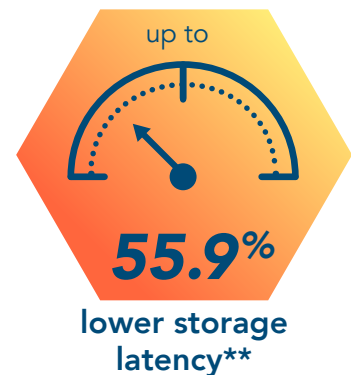
Ensure greater uptime and boost VMware vSAN cluster performance with the Dell EMC PowerEdge MX platform

The Dell EMC PowerEdge MX with VMware vSAN Ready Nodes delivered a 55.9% faster response time than a Cisco UCS solution and a 41.3% faster response time than an HPE Synergy solution

Improving the performance of traditional applications with emerging technologies can help your organization achieve many goals, from growing your revenue to expanding your customer base. The new Dell EMC PowerEdge MX modular solution powered by Intel Xeon Scalable processors offers an innovative, flexible architecture that allows your organization to create sizable VMware vSAN™ software-defined storage (SDS) environments that can boost performance of traditional applications. These environments can also dynamically scale and respond to your changing operational needs now and in the future.

The Dell EMC PowerEdge MX loosens the bounds of traditional infrastructure by leveraging shared pools of compute, storage, and networking assets to create consumable resources on demand, which can allow organizations to adapt to changing workload demands and get better performance from applications.

Our Dell EMC PowerEdge MX solution was a vSAN Ready Node configuration with all NVMe drives for both cache and capacity tiers.[1] The unique all-NVMe design and greater drive count of the platform contributed to the advantages we saw in our testing. Due to this unique storage layout, the powerful, robust Dell EMC PowerEdge MX solution with vSAN in our data center at Principled Technologies supported more virtual environments and offered better database application performance than HPE Synergy and Cisco UCS® vSAN ReadyNode™ solutions.

*Image provided by Dell EMC.
**vs. two competing hyper-converged solutions.
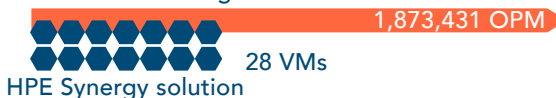
Maximize vSAN environments with more VMs

Organizations deploying vSAN on the Dell EMC PowerEdge MX with Dell EMC vSAN Ready Nodes can bring storage and compute resources closer together to simplify storage provisioning as well as hardware management. This means maximizing vSAN environments that can scale and support better database performance. The Dell EMC PowerEdge MX solution supported more VMs running online transaction processing (OLTP) workloads than the competing HPE Synergy and Cisco UCS ReadyNode solutions.

Handle more transactions for Microsoft® SQL Server® 2016 databases

An increase in database transactions indicates that a higher number of users can place orders, browse your catalog, and more, which can ultimately increase your revenue. The new Dell EMC PowerEdge MX solution achieved over 1.8 million OPM and outperformed the HPE Synergy and Cisco UCS solutions by 220,347 and 625,157 OPM respectively. With the Dell EMC PowerEdge MX solution, more users can search, view, or update data faster. If your organization runs e-commerce and other transactional database applications, better performance can lead to more sales and more happy customers.

SQL Server transactions and VM count (higher is better)

Dell EMC PowerEdge MX solution
1,873,431 OPM
28 VMs

HPE Synergy solution
1,653,084 OPM
28 VMs

Cisco UCS solution
1,248,274 OPM
20 VMs

To find out more about Dell EMC PowerEdge MX, visit
https://www.dellemc.com/en-us/servers/modular-infrastructure.htm

1   For detailed information on our configuration, see the full Principled Technologies report.

Boost application response times

When webpages and applications take too long to load, you can lose customers—and revenue. The Dell EMC PowerEdge MX solution offered 41.3 percent shorter average response times than the HPE solution and 55.9 percent shorter average response times than the Cisco solution. Saving even fractions of a second on large-scale operations can help increase the volume of e-commerce orders and generate more revenue.

Average latency in milliseconds (lower is better)
Dell EMC PowerEdge MX solution

HPE Synergy solution   Cisco UCS solution

18 ms   **11 ms**   25 ms

Get more infrastructure flexibility

The Dell EMC PowerEdge MX solution offers two ways to more effectively protect data and maintain better uptime:

- First, it offered **greater flexibility** than the competition—that means you can configure compute, storage, and networking components based on your current infrastructure needs and change components when necessary. More flexibility could mean **greater redundancy for improved data protection and better performance** as well.

- Second, each compute sled can **support up to six NVMe drives** while each HPE and Cisco compute node can support only two. Considering each solution ran a four-sled or node vSAN cluster, the Dell EMC PowerEdge MX solution could have larger storage capacity in the same amount of rack space.

Read the report at http://facts.pt/3jrn39   ▶

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