

Scalable all-flash storage for today's infrastructure

Dell Technologies designed the Dell EMC PowerStore line on a clean sheet of paper to meet the demands of current-gen and next-gen datacenters, where workloads are highly virtualized and becoming more and more containerized.



GOALS

Dell EMC PowerStore provides greater flexibility for customers in multiple dimensions

- Scale out as well as scale up
- The unique application flexibility of **AppsON**
- Migration benefits of **Anytime Upgrade**

Consolidation

Dell Technologies' consolidated and expanded the capabilities of their existing midrange storage lines under a single platform in order to reduce complexity while streamlining the customer purchasing process.



Eliminate Forklift Upgrades



The new Anytime Upgrade program gives customers no-downtime data-in-place upgrades to either next-gen controllers or "next-gen plus one model up." For those who need more capacity, the Anytime Upgrade Scale-out option will add another unit.

MODELS

The Dell EMC PowerStore line is currently composed of six different models

500

1000

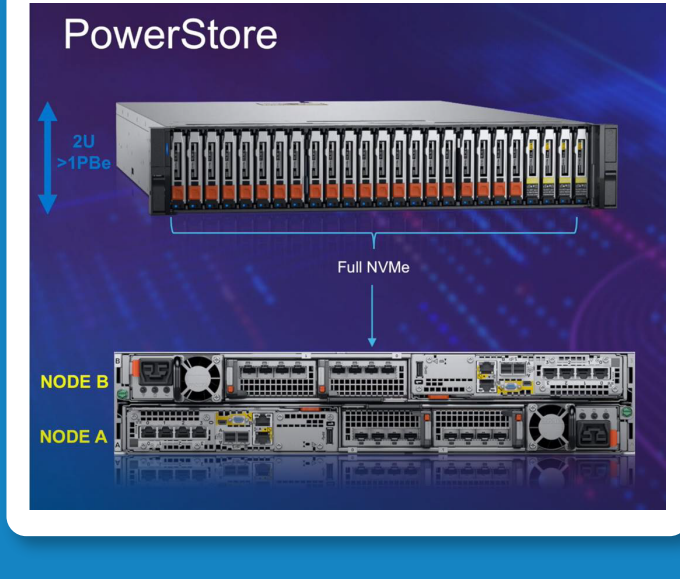
3000

5000

7000

9000

[Download the Spec Sheet](#)



A Dell EMC PowerStore appliance starts with a 2U base enclosure that has two active-active nodes and **25 NVMe drive slots**. For the PowerStore 1000 through 9000 models, four of these slots are reserved for NVRAM modules, and 21 slots are available for flash or Intel Optane SSDs. A PowerStore 1000 model supports up to 25 drives in the appliance.

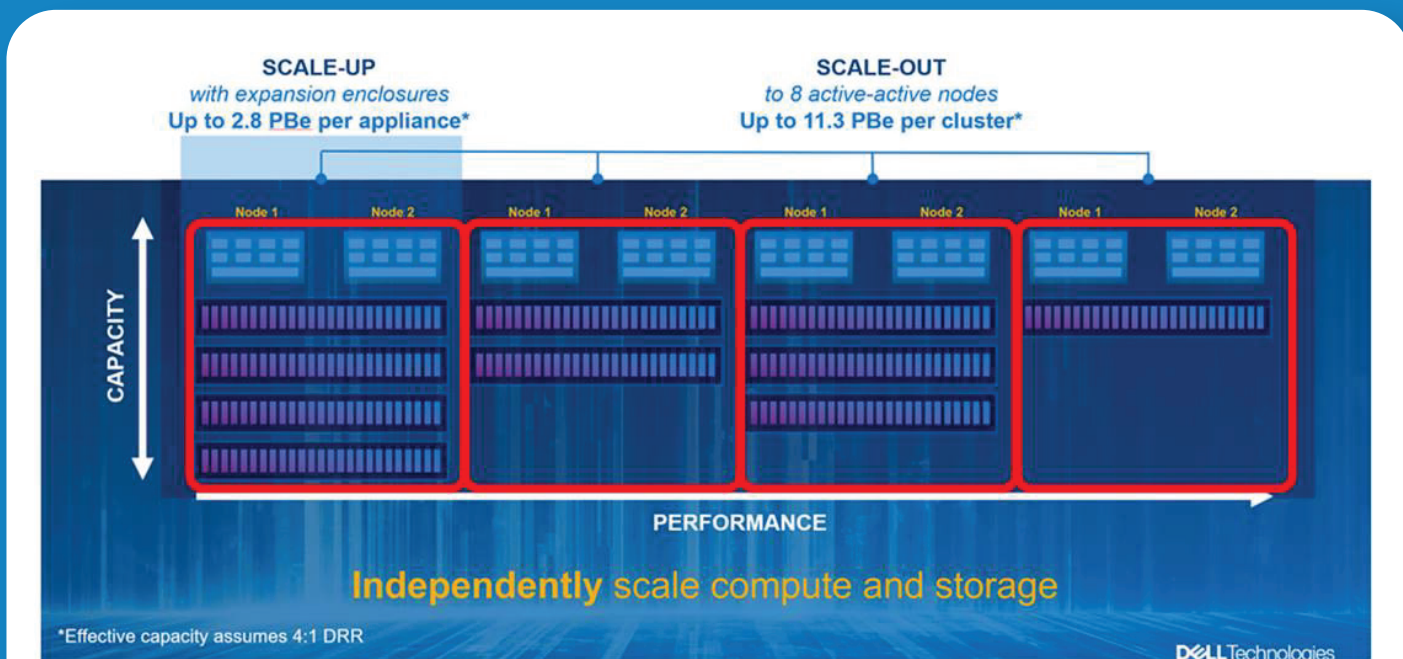
A PowerStore can be configured with as few as six drives and scaled up, with single-drive granularity, until the slots in the base enclosure have been consumed. The drives consuming the slots are NVMe flash and range in capacity from **1.92TB** to **15.36TB**.



PowerStore 1000 through 9000 appliances can be scaled up by adding up to three additional 25 drive shelves, for a total drive count of 96 and **2.8PB** of effective capacity.



WHEN FULLY CONFIGURED, A FOUR-APPLIANCE DELL EMC POWERSTORE CLUSTER CAN HAVE AN EFFECTIVE CAPACITY OF UP TO 11.3PB



Dell EMC PowerStore allows storage to scale down and up by introducing a more performant Dell EMC PowerStore appliance (**scale-up**) into a cluster and then consolidating the workloads from the less performant appliance onto it.

A company can then repurpose the unused appliances (**scale-down**).

OUR TEST

To get a feel for what it takes to create a Dell EMC PowerStore cluster we added a 7000T to our existing 5000T.

Overall, it took us about 20 minutes to scale out our storage by adding a second storage appliance to it. The process was painless as the new storage appliance was automatically detected and it only took a couple of clicks and three IP addresses to add it.

The ability to scale up as well as out using PowerStore appliances is somewhat unique among midrange storage lines but it gives IT departments choices to right-sizing their storage and does not force them into a one-size-fits-all model.

The ease of management, monitoring, and expandability in the Dell EMC PowerStore line of storage appliances shows the thought that Dell Technologies put into making this line of midrange appliances.

[Learn More About the Test](#)

CONCLUSION

Dell Technologies made the right choice to start with a clean slate when designing the Dell EMC PowerStore line of storage arrays. By doing this, they could use the latest hardware (including dual-ported Intel Optane SSDs), which increases reliability and decreases latency, as well as the latest technologies like PowerStoreOS which creates the ability to add, update, or upgrade the array in a non-disruptive manner.

In our hands-on testing, we found that we could set up the array in only seven clicks, and then get usable storage for our vSphere environment with just a few more. We were then able to import the database from an SQL server that was being stored on Unity to PowerStore all from the PowerStore interface with a minimal amount of clicks.

If you want some hands-on with Dell EMC PowerStore, Dell Technologies has set up a **Hands-on Lab** and **Interactive demo** for it. You can also see more information about PowerStore systems here.