DELL Technologies

Top Reasons

Why Customers Choose PowerVault ME5 Storage and PowerEdge Servers for High Performance Computing (HPC)

High-Performance Computing (HPC) with sophisticated data modeling, analytics and simulation capabilities are having a transformational effect on enterprise markets like Media/Entertainment, Oil and Gas, Financial Services, Genomics and Life Sciences. HPC's data-centric and analytic computing model is also driving the need for separate, reliable and scalable storage systems that can keep pace with data growth these environments create. The need to effectively store, manage, analyze, and extract information from the volumes of data inside clustered HPC Parallel File Systems makes server computational power and storage system capacity compatibility that more important.

1. Validated Configurations

Validated PowerEdge server and PowerVault storage configurations provide easier, faster, and lower-cost deployment for modular HPC environments. Dell Technologies provides pre-tested configurations including software, hardware, storage, and connectivity—along with documented best practice guides that enable you to start small and grow as your HPC needs increase. Validated configurations enable longer server utilization while being able to add direct-attached storage capacity externally and seamlessly.

2. Price-Performance Choice

When companies need to store, process and quickly access large amounts of HPC data for analysis, they turn to Dell PowerEdge Servers connected to PowerVault ME storage. This infrastructure combination helps businesses reduce Capex/Opex of compute and dense data storage at affordable price/performance points. Combining these modern infrastructure platforms is an affordable way to drive the performance and throughput you need for most HPC environments. You can flexibly operate RAID either in the server or in the storage to optimize performance. PowerVault's RAID controller arrays preserve processing power allowing more space and speed to read and write data and works with any OS. Alternatively, PowerEdge PERC RAID controllers offer reliability, performance and high-speed connectivity if JBODs are utilized.

3. Topology Flexibility

PowerEdge servers and PowerVault storage provide flexibility allowing you to configure them as Direct-Attach Storage (DAS) topologies with dense storage capacity. Separating the compute and storage allows you to modularly grow the HPC environment while only replacing PowerEdge servers when more memory or CPU is required and flexibly add storage capacity as needed. When configured for DAS, the combination of compute and storage provides HPC environments with the best operational performance since the server does not have to traverse a switched network to read and write data.

4. Simplified Management

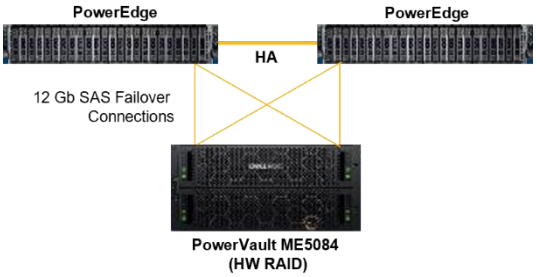
Easily manage PowerEdge servers and PowerVault storage together along with other Dell Technologies and third-party platforms from a single pane of glass. Open and extensible management options are available including Dell OpenManage Enterprise (OME). Additionally, you can use iDRAC and CloudIQ for server and storage predictive analytics and health monitoring, respectively. The management options can be leveraged to speed time to repair, reduce monitoring efforts, accelerate new deployments and improve the end-user experience.

5. Single Service and Support Structure

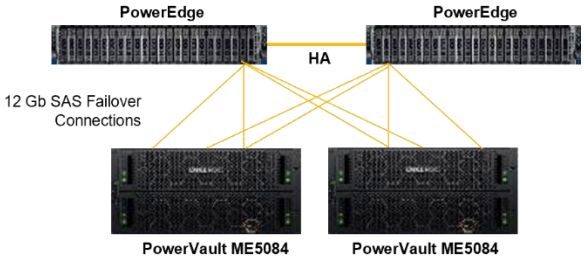
When customers combine PowerEdge Servers and PowerVault storage for running business solutions, they're immediately assured that a successful customer support team comes with them. There's never any finger pointing about where an issue resides – our highly trained service and support professionals will always deliver the best customer service experience in the industry. As your business undergoes rapid growth and must cope with all the changes that come with it, Dell Technologies will be there – at all service levels. You just need to make one call - to Dell Technologies – your trusted partner.

SCALABLE. HIGH PERFORMANCE. AFFORDABLE.

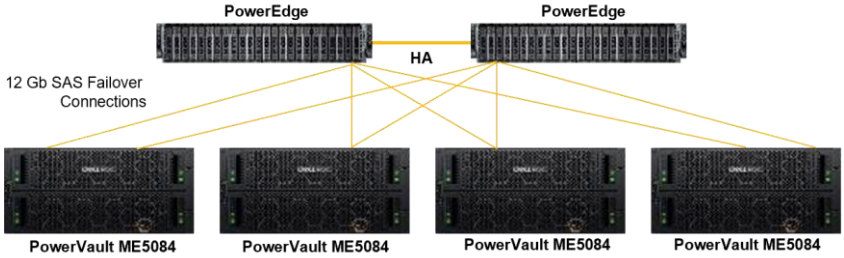
Small HPC Configurations



Medium HPC Configurations



Large HPC Configurations



Learn more about Dell PowerVault ME5

Contact a Dell Technologies Expert