



Top Reasons to virtualize data-demanding environments with high performing servers and storage

Demanding applications and business environments are typical scenarios of today's competitive business environment, forcing IT organizations to accurately predict and deploy the infrastructure necessary for growth. Modernized organizations who have transformed operations extract the most benefits from their servers and storage to drive faster insights by also leveraging virtualization and VDI. Dell EMC PowerEdge 4-socket servers and the newly introduced Dell EMC PowerStore storage family deliver unique capabilities boosting businesses and worker productivity to higher levels.

1 Build the right foundation for virtual operations

Unifying operations and management is key to efficient IT operations and agility. Virtualization, a Software-defined architecture, enables common infrastructure and control plane benefits that enterprises and data centers have leveraged for years to manage growth while remaining flexible. Virtualizing servers and storage enables more automation, better utilization and faster provisioning of resources. PowerEdge servers and PowerStore storage offer strong integrations with key virtualization environments including VMware® ESXi™ and Microsoft Windows Hyper-V, to consolidate configuration and lifecycle management into the hypervisor console. Furthermore, the new PowerStore AppsON provides flexibility to run VMware virtualized apps directly on the appliance.

2 Accelerate workforce transformation with scalable VDI solutions

The popularity of VDI approaches has helped fuel an uplift in remote workforce productivity and access. In addition, workforce access to applications, data and workloads increases - requiring a scalable and robust hardware approach. PowerEdge 4-socket servers boost virtual machine performance and consolidate more users into fewer servers, while enabling full-fledged operating environments for multiple application access, concurrently and remotely. PowerStore efficiently delivers fast, unified storage with block and file services for VDI users, easily supporting high-density VM configurations, and with sub-millisecond latency to 3,600 virtual desktops¹. Dell PowerStore delivers a single storage solution for VMs and user data.

¹ <https://www.dell.com/en-us/collaterals/unauth/white-papers/products/storage/h18239-dell-emc-powerstore-vmware-horizon-vdi-reference-architecture.pdf>, VDI workload with 3,600 VMware® Horizon® virtual desktops on the Dell EMC™ PowerStore™ 9000T model storage array

3 Extend to the cloud

The increase of cloud adoption has hastened business strategy to leverage cloud as a way to optimize the business, while leaving IT to define the strategy and work through the complexity of migration planning. Enterprises with demanding workloads today on-premise have more options available to them than just contemplating the public cloud decision and the risks to data migration, security, compliance and costs. Implementing an agile cloud infrastructure deployed on-premise with servers and storage can deliver a consistent, secure and agile foundation for IT. VMware Cloud Foundation (VCF) drives a fast path to hybrid cloud, reducing overall TCO and leveraging cloud-ready servers and storage. PowerEdge servers and PowerStore arrays are VCF-qualified and available as Dell Technologies Cloud Validated Designs for IT organizations to deploy with peace of mind. Furthermore, Dell EMC Cloud Storage Services and VMware enable connectivity to public cloud, including data recovery and managed services.

4 Accelerated performance for virtualized workloads

Designing a modern infrastructure which minimizes IT challenges and drives business success can be accomplished in many ways. With a software-defined, virtual environment, IT organizations are able to provision the server and storage resources to power mixed workloads and demanding applications including SQL, SAP HANA, database, AI, data analytics, HPC and other high-performance needs. PowerEdge 4-socket servers are fine-tuned for optimal performance for diverse workloads, delivering high core density and workload-centric optimizations, including GPU database acceleration. PowerStore arrays drives 7x more performance² to deliver data with low latency. NVMe all-flash or Storage Class Memory (SCM) with Intel® Optane™ optimizes performance for both PowerEdge and PowerStore.

5 Optimize TCO and right-size consumption

Traditional approaches to extracting value from infrastructure are changing as more consumption approaches evolve, influenced by new economics models and cloud. With businesses focused on bottom-line expenditures, IT organizations must be able to adapt and select flexible consumption options which match usage and workload requirements. Even software-defined infrastructures based on virtualization can now be consumed on-demand and as-a-service. PowerEdge four-socket servers and PowerStore arrays are available in a pay-per-usage approach from Dell Financial Services and the Flex on Demand metered usage model. By analyzing business usage for predictable applications and workloads, supported with virtualization, IT organizations can leverage a flexible, OPEX economics model which can also enable additional capacity and deploy a fully-managed environment for mixed, production workloads. Reduce risk and restore agility to deliver the results for the business while reducing ROI.

2. Based on Dell analysis comparing PowerStore 9000 4x cluster to Unity XT 880 running 70/30 random read/write mix, 8K block size with compression and deduplication active, March 2020. Actual performance will vary based on configurations and usage and manufacturing variability

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