Dell EMC PowerScale

Unlocking the Potential within Your Data

ESSENTIALS

- PowerScale enables you to unlock the structure within your unstructured data
- Address challenges with your unstructured data management
- New NVMe PowerScale nodes deliver high performance storage
- Simply manage data at the edge, datacenter and cloud
- Massive capacity and performance scalability
- Reduced costs with unmatched storage efficiency, deduplication and compression
- Optimize resources with tiered storage of all-flash, hybrid and archive nodes
- Operational flexibility with multiprotocol support
- High availability and resilient data protection

PowerScale helps you unlock the structure within your data and to address the challenges with unstructured data management. PowerScale is the next evolution of the OneFS – the operating system powering the industry's leading scale-out NAS platform. The PowerScale family includes Isilon nodes, PowerScale nodes and PowerScale OneFS running across all of them. The software defined architecture of OneFS give you simplicity at scale, intelligent insights and the ability to have any data anywhere it needs to be. Whether it is hosting file shares or home directories or delivering high performance data access for applications like analytics, video rendering and life sciences, PowerScale can seamlessly scale performance, capacity and efficiency to handle any unstructured data workload. PowerScale brings a new version of OneFS to our Isilon nodes as well as two new all-flash PowerScale nodes, that delivers application requirements like S3 protocol and performance needs like NVMe, from the edge to the cloud. The new PowerScale all-flash platforms co-exist seamlessly in the same cluster with your existing Isilon nodes to drive your traditional and modern applications.

It's not just data, it's your business

A large portion of your data is unstructured data and that dataset is growing exponentially – not just in the datacenter but at the enterprise edge and in the cloud. PowerScale OneFS powered scale-out storage solutions are designed for organizations that want to manage all their data, not their storage. Our storage systems are powerful yet simple to install, manage and scale to virtually any size. The storage includes a choice of PowerScale all-flash nodes along with Isilon all-flash, hybrid or archive nodes to meet the most demanding business needs. And, unlike traditional enterprise storage, these solutions stay simple no matter how much storage capacity is added, how much performance is required or how business needs change in the future.

In a world where unstructured data is growing rapidly and taking over the data center, organizations are looking for ways to get more out of their data. Whether it is driving innovation, getting to market faster or creating differentiation, they want the data to start creating value. Instead of thinking of destinations for your data, you think about what the data is going to be used for, who will be using it and how the data will help you solve for their business needs. When you have a data first mindset, the goal is to get any data to where it needs to be for business needs. Whether it is all-flash Edge offerings or the cloud to take advantage of the tools and access, data must be located where it needs to be for the business

With OneFS powered clusters consisting of PowerScale or Isilon nodes, you can eliminate storage silos, consolidate all your unstructured data, store petabytes of file data and analyze them in a data first world. With up to 252 nodes in a cluster, you can scale both capacity and performance in a few minutes to meet your specific business needs—all without any additional IT burden. With the performance of all-flash node that are configured with NVMe, you can drive demanding workloads like Artificial Intelligence, Machine Learning and Deep Learning.

OneFS operating system powers scale-out storage solutions

The OneFS operating system provides the intelligence behind the highly scalable, high–performance modular storage solution that can grow with your business. With support for all-flash and NVMe, OneFS can help you accelerate processes and workflows while scaling easily to handle massive growth and providing the highest levels of data protection. This is all provided in a storage solution designed for unmatched ease of use.

Orchestrated by OneFS, all components in a cluster work to create a unified pool of highly efficient storage—with a storage utilization rate of up to 80 percent. With SmartDedupe data deduplication, you can further reduce your data storage requirements by up to 35 percent. The F810, F200 and F600 all-flash platforms and the H5600 hybrid platform deliver improved data reduction with features like inline compression and deduplication to dramatically increase the effective storage capacity and density of your storage solution. The unmatched efficiency of the storage systems means that less physical storage and space is required to house the same amount of data—reducing both initial capital outlay and ongoing costs. With the OneFS AutoBalance function, you can quickly

and easily add nodes without downtime, manual data migration, or application logic reconfiguration, saving precious IT resources. Because the storage is so easy to manage, it requires fewer IT resources for storage administration than traditional storage systems, which further reduces overall operating costs.

You can streamline your storage infrastructure by consolidating large-scale unstructured data assets thus eliminating silos of storage. OneFS powered solutions include integrated support for a wide range of industry-standard protocols, including Internet Protocols IPv4, and IPv6, NFS, SMB, S3, HTTP, FTP and HDFS. As a result, you can simplify workflows, accelerate business analytics projects, support cloud initiatives and get more value from your enterprise applications and data. With new support for the high performance, multi-protocol S3, data can have all data simultaneously read and write through any protocol and they no longer need to migrate and copy data from a secondary source to run their modern cloud-enabled applications

Massive stores of data present unique management challenges including disaster recovery, quota management and offsite replication. OneFS data protection and management software provides you with powerful tools that help you protect your data assets, control costs and optimize the storage resources and system performance of your big data environment.

PowerScale OneFS Software Portfolio

SOFTWARE	FEATURE	DESCRIPTION
SMARTDEDUPE	Data management	Increase efficiency and reduce storage capacity requirements by up to 35 percent with deduplication of redundant data across multiple sources
CLOUDIQ	Data Management	Simplify the storage management tasks of PowerScale, Isilon and other Dell hardware with predictive analytics capabilities from a single console
DATAIQ	Data management	Locate, access and manage data and gain a holistic view across heterogeneous storage systems with a single pane of glass
SMARTQUOTAS	Data management	Assign and manage quotas at the cluster, directory, user, and group levels
INSIGHTIQ	Performance management	Performance monitoring and reporting
SNAPSHOTIQ	Data protection	Protect data efficiently and speed the recovery of critical data with on-demand snapshot restores
SYNCIQ	Data replication	Securely replicate data sets to multiple sites for reliable disaster recovery and use push-button failover and failback
SMARTLOCK	Data retention	Protect your critical data against accidental, premature, or malicious alteration or deletion and meet compliance and governance needs
SMARTCONNECT	Data access	Enable client connection load balancing and the dynamic failover and failback of client connections
CLOUDPOOLS	Resource management	Seamless tiering of cold or frozen data to public or private cloud providers
SMARTPOOLS	Resource management	Tiered storage strategy to optimize storage performance and efficiency

Hardware platforms: Flexible product lines

OneFS powered solutions offer highly flexible scale-out storage solutions with precisely the right storage on a "grow-as-you-go" basis, eliminating the need for overprovisioning. The hardware platforms are built on the innovative scale-out storage architecture— designed for simplicity, value, outstanding performance and reliability. The platforms seamlessly integrate with existing clusters or can be deployed in new clusters. OneFS powered clusters include a choice of all-flash, hybrid and archive nodes to satisfy a wide variety of workloads and applications.

PLATFORM	USE CASE
POWERSCALE F200, F600	Digital media: small and medium-size studios Enterprise edge: remote and branch offices along with edge locations needing high performance local storage Healthcare, Life Sciences: Genomics sequencing, digital pathology, small hospitals, clinics
ISILON F800, F810	Digital media: 4K, broadcast, real-time streaming, and post-production Electronic Design Automation: design, simulation, verification, and analysis of electronic and mechanical systems design Life Sciences: genomics DNA and RNA sequencing
ISILON H400, H500, H5600, H600	Digital media: broadcast, real-time streaming, rendering, and post-production Enterprise File Services: Home directories, File shares, group and project data Analytics: Big data analytics, Hadoop and Splunk log analytics
ISILON A200, A2000	Deep archives: for large-scale, archiving data storage that offers unmatched efficiency to lower costs Disaster recovery: disaster recovery target for organizations requiring an economical, large-capacity storage solution File archives: for economical storage and fast access to reference data to meet business, regulatory and legal requirements

Take the next step

Contact your Dell EMC sales representative or authorized reseller to learn more about how OneFS powered scale-out NAS storage solutions can benefit your organization.

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