

Dell EMC PowerScale

At-a-Glance

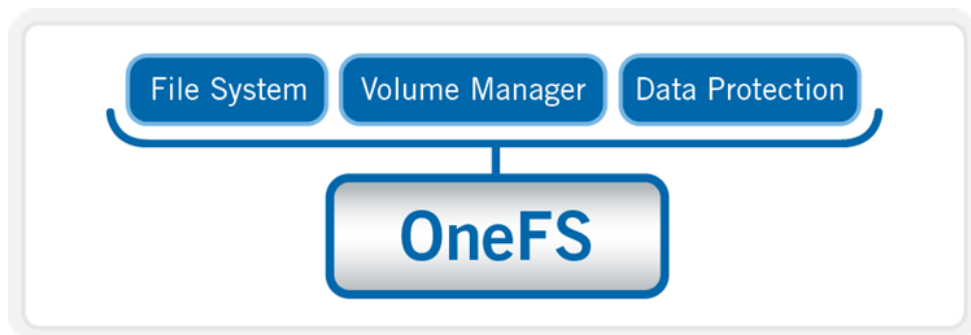
PowerScale brings the strength of Dell Technologies to the world's leading scale-out NAS platform to provide a foundation for next generation unstructured data management. Dell EMC PowerScale and Isilon nodes - powered by the PowerScale OneFS operating system - form the ideal platform to store, manage, secure, protect and analyze unstructured data efficiently while supporting a wide range of applications and workloads.

Key advantages include:

- **Simplicity at scale:** Unlock the potential within your unstructured data using a solution that provides a single file system, single volume namespace that scales to PBs of capacity
- **Extreme performance:** Support your most demanding file workloads with solutions that deliver up to 15.8 million IOPS and up to 945 GB/s aggregate throughput on a single cluster. New PowerScale F600 nodes with full NVMe support delivers massive performance in a compact form factor
- **Highly efficient:** OneFS delivers up to 80% storage utilization for maximum storage efficiency. Data deduplication can further reduce storage requirements by up to 30% and in-line data compression on the F200, F600, F810 all-flash platforms and the H5600 hybrid platform can reduce the space consumed
- **Any data, anywhere:** Support a wide range of data types and diverse workloads with built-in multi-protocol capabilities including NFS, SMB, HDFS, S3, HTTP and FTP protocols. Store data anywhere – at the edge, in the datacenter or in the cloud
- **Optimized data placement:** Optimize resources with policy-based, automated storage tiering to move data automatically to lower cost tiers, including public and private cloud storage with a choice of cloud providers
- **Enterprise data protection:** OneFS powered storage platforms are highly resilient with up to N+4 redundancy and offer proven enterprise-grade back-up and disaster recovery options
- **Robust security options:** RBAC, Access Zones, SEC 17a-4 WORM compliance, File System Auditing, File blocking, SMB3 encryption, Data At Rest Encryption (DARE) with SEDs, STIG hardening, Multi-factor authentication, HDFS transparent data encryption and FIPS 140-2 validation
- **Powerful big data analytics:** Maximize data capital with in-place analytics that seamlessly integrate with leading vendors like Pivotal, Cloudera, Hortonworks and Splunk to drive workloads in Artificial Intelligence, Machine Learning or Deep Learning

PowerScale OneFS operating system

The OneFS operating system provides the intelligence behind the scale-out storage systems. It combines the three layers of traditional storage architectures—file system, volume manager and data protection—into one unified software layer, creating a single intelligent file system that spans all nodes within a cluster. OneFS is a single file system, single volume architecture, which makes it extremely easy to manage, regardless of the number of nodes in your cluster. The storage systems powered by OneFS are simple to install, manage and scale.



Dell EMC PowerScale and Isilon nodes

Attribute	PowerScale F200, F600	Isilon F800, F810	Isilon H600	Isilon H5600	Isilon H500, H400	Isilon A200	Isilon A2000
Rack Units	1U	4 nodes in 4U	4 nodes in 4U	4 nodes in 4U	4 nodes in 4U	4 nodes in 4U	4 nodes in 4U
Nodes per Chassis	N/A	4	4	4	4	4	4
Per Node Capacity	F200: 3.84 – 30.72 TB F600: 15.36 – 122.8 TB	F800: 24 - 231 TB F810: 57.5 - 231 TB	18 - 36 TB	200 - 320 TB	30 - 180 TB	30 - 240 TB	200 - 320TB
Storage Media per node	F200: 4 SSDs F600: 8 NVMe SSDs	15 SSDs	30 SAS drives	20 SATA drives	15 SATA drives	15 SATA drives	20 SATA drives
Storage Media Capacity Options	F200: 960 GB, 1.92 TB, 3.84 TB, 7.68 TB SSDs F600: 1.92 TB, 3.84 TB, 7.68 TB, 15.36 TB NVMe SSDs	3.84 TB, 7.68 TB or 15.36 TB SSDs	600 GB or 1.2 TB SAS drives	10 TB, 12 TB or 16 TB SATA drives	2 TB, 4 TB, 8 TB or 12 TB SATA drive	2 TB, 4 TB, 8 TB, 12 TB or 16 TB SATA drives	10 TB, 12 TB or 16 TB SATA drives
ECC Memory per Node	F200: 48 or 96 GB F600: 128 GB, 192 GB or 384 GB	256 GB	256 GB	256 GB	H400: 64 GB H500: 128 GB	16 GB	16 GB
PowerScale OneFS version	OneFS 9 and above	OneFS 9 and above	OneFS 9 and above	OneFS 9 and above	OneFS 9 and above	OneFS 9 and above	OneFS 9 and above

PowerScale OneFS software features

InsightIQ	No charge software that maximizes the performance of your scale-out storage system with performance management, monitoring and reporting capabilities
DatalQ	Locate, access and manage data in seconds, no matter where it resides – across file and object storage, on-prem or in the cloud. Gain a holistic view across heterogeneous storage systems with a single pane of glass, effectively breaking down data trapped in siloes
SmartConnect	Enable client connection load balancing and the dynamic NFS failover and failback of client connections across storage nodes to optimize the use of cluster resources
SmartQuotas	Assign and manage quotas that seamlessly partition and thin provision storage into easily managed segments at the cluster, directory, subdirectory, user and group levels
SnapshotIQ	Protect data efficiently and reliably with secure, near-instantaneous snapshots, while incurring little to no performance overhead and speed the recovery of critical data with near-immediate on-demand snapshot restores
SyncIQ	Securely replicate and distribute large mission-critical data sets to multiple shared storage systems in multiple sites for reliable disaster recovery capability and use push-button failover and failback simplicity to increase the availability of mission-critical data
SmartLock	Protect your critical data against accidental, premature, or malicious alteration or deletion with our software-based approach to WORM and meet stringent compliance and governance needs, such as SEC 17a-4 requirements
SmartDedupe	Increase efficiency and reduce storage capacity requirements by up to 35 percent with deduplication of redundant data across multiple sources
CloudIQ	Simplify the storage management tasks of Isilon and other Dell hardware with predictive analytics capabilities from a single console
SmartPools	Implement a highly efficient, automated tiered storage strategy to optimize storage performance and efficiency
CloudPools	Seamless tiering of infrequently accessed data to public or private cloud storage options including Microsoft Azure, Amazon AWS, Google Cloud, Alibaba Aliyun, Dell EMC ECS, and Dell EMC PowerScale OneFS powered nodes

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