Data Sheet

Dell PowerScale

Modern, flexible scale-out file storage

ESSENTIALS

- Simplicity at scale with up to 186PB of raw capacity in a single 252-node cluster
- A choice of all-flash, hybrid and archive nodes with multi-cloud and native cloud solutions
- Operational flexibility with multiprotocol support
- NVMe SSDs enabled by various flash technologies, for high performance and density
- Edge, core and cloud deployment flexibility
- Reduced costs with unmatched storage efficiency
- Built-in robust federal grade security features and integrated cyber protection
- Broad ISV ecosystem with 250+ ISV tests and validations supported by deep industry

Easily handle the most demanding and critical data rich projects with PowerScale, the world's most flexible [1], secure [2], and efficient [3] scale-out NAS solution.

Designed to handle your most ambitious data challenges, the PowerScale enterprise-class storage platform includes all-flash, hybrid and archive nodes as well as multicloud solutions. The software defined architecture of PowerScale OneFS, the operating system that powers the world's most secure NAS storage array[2], enables simplicity at scale, intelligent insights, and the ability to place the data anywhere it needs to be – at the edge, in the core or in the cloud. PowerScale can be deployed and consumed anywhere your data is – in your on-premises data center as an appliance, in multicloud and native cloud solutions or in APEX delivered as-a-service. Whether you are hosting file shares, home directories or delivering high performance data access for applications like analytics, AI/ML, video rendering or life sciences, PowerScale can seamlessly scale performance, capacity, and efficiency to handle any unstructured data workload to drive both, traditional and modern applications.

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

In a world where unstructured data continues to grow exponentially year over year – in the data center, at the enterprise edge and in the cloud – our OneFS powered PowerScale scale-out storage solutions are designed for organizations that want to manage their data, not their storage. Unlike traditional enterprise storage, our PowerScale appliances are powerful yet simple to install, manage and scale to virtually any size – no matter how much storage capacity is added, how much performance is required or how business needs change in the future. Whether your goal is driving innovation, getting to market faster or creating differentiation, your data needs to create value. Instead of thinking of destinations for your data, 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.

With OneFS powered clusters of PowerScale 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 burden on IT.

OneFS operating system powers scale-out storage

The OneFS operating system provides the intelligence behind the highly scalable, high–performance modular PowerScale storage solution that can grow with your business. With support for various flash technologies offered in NVMe SSD, OneFS can help you accelerate the most demanding processes and workflows like Generative AI, with flexible scaling to handle massive growth and the highest levels of data protection. You can drive workloads like Artificial Intelligence, Machine Learning and Deep Learning with the performance of our all-flash nodes configured with NVMe.

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. The PowerScale F910, F900, F710, F600, F210, and F200 all-flash platforms, H700 and H7000 hybrid platforms and A300 and A3000 archive platforms 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

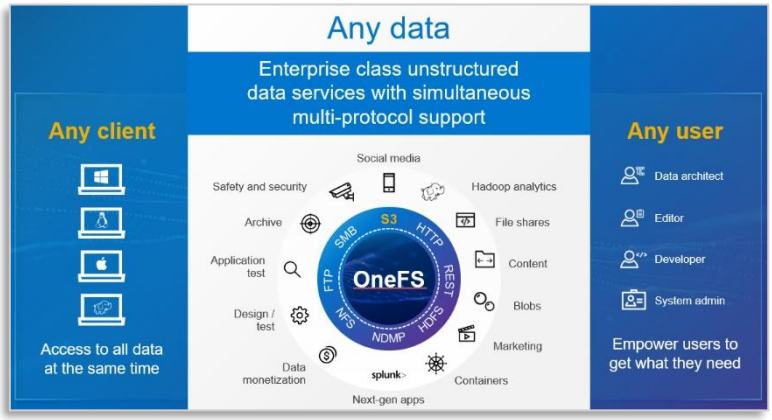
means that less physical storage and space is required to house the same amount of data – reducing both initial capital outlay and ongoing costs,

such as those related to power and cooling. 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. Since PowerScale storage is so easy to manage, it requires fewer IT resources for storage administration than traditional storage systems, which further reduces overall operating costs. Further streamline your storage infrastructure by consolidating large-scale unstructured data assets and eliminating silos of storage.

To simplify workflows, accelerate business analytics projects, support cloud initiatives, and get more value from enterprise applications and data, 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.

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. Software like Dell SupportAssist, CloudIQ and InsightIQ lower storage management costs while improving storage monitoring and troubleshooting.

PowerScale delivers robust federal grade security features including STIG hardening, host-based firewall, and data encryption. The comprehensive security features deliver added data protection, reduce risk and improve governance.

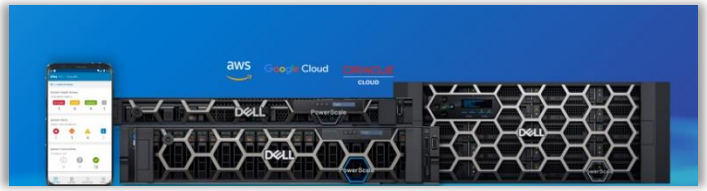


PowerScale OneFS Software Portfolio

SOFTWARE	FEATURE	DESCRIPTION
SMARTDEDUPE	Data management	Increase efficiency and reduce storage capacity requirements with deduplication of redundant data across multiple sources
CLOUDIQ	Monitoring	Simplify the storage management tasks of PowerScale, Isilon and other Dell Technologies infrastructure systems with proactive monitoring and predictive analytics from a single console
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
SMARTPOOLS	Resource management	Tiered storage strategy to optimize storage performance and efficiency
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

SOFTWARE	FEATURE	DESCRIPTION
CLOUDPOOLS	Resource management	Seamless tiering of cold or frozen data to public or private cloud providers
SYNCIQ	Data replication	Securely replicate data sets to multiple sites for reliable disaster recovery and use push-button failover and failback
SMARTSYNC	Replication	Replicates data between PowerScale system, between PowerScale and ECS and public clouds like Microsoft Azure and AWS

Hardware platforms: Flexible product lines



PowerScale flexible scale-out storage solutions precisely offer the right storage on a “grow-as-you-go” basis, eliminating the need for overprovisioning. Our hardware appliances are built on the innovative scale-out storage architecture—designed for simplicity, value, outstanding performance, and reliability. They integrate seamlessly with existing clusters or can be deployed in new clusters. PowerScale OneFS clusters can be populated with a choice of all-flash, hybrid and archive nodes to satisfy a wide variety of workloads and applications. Embedded, integrated, or attached OEM versions are available for PowerScale nodes as either de-branded or re-branded solutions.

PLATFORM	USE CASE
POWERSCALE F210, F710, F910	Ideal for Gen AI in all phases of workflows Media & Entertainment (M&E) workflows: 4K, 8K, broadcast, real-time streaming, and post-production Electronic Design Automation (EDA): design, simulation, verification, and analysis of electronic and mechanical systems design
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
POWERSCALE F600, F900	Digital media: 4K, 8K, 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
POWERSCALE H700, H7000	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
POWERSCALE A300, A3000	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 sales representative or authorized reseller to learn more about how PowerScale OneFS powered scale-out NAS solutions can benefit your organization.

Shop products to compare features and get more information.

[1] Based on Dell analysis of publicly available information sources measured across 7 attributes, February 2023.

[2] Based on Dell analysis comparing cyber-security software capabilities offered for Dell PowerScale vs. competitive products, September 2022.

[3] Based on Dell analysis comparing efficiency-related features: data reduction, storage capacity, data protection, hardware, space, lifecycle management efficiency, and ENERY STAR certified configurations, June 2023.

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