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 and QLC-enabled nodes for the highest performance
- 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 experience

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

Designed to handle your most ambitious data challenges, the PowerScale enterprise-class storage platform includes all-flash, hybrid and archive nodes as well as multi-cloud solutions. The software defined architecture of PowerScale OneFS, the operating system that powers the world’s most secure NAS storage array2, 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 multi-cloud 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 place the data at the edge, in the core or in the cloud. 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 QLC drives, 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. You can drive demanding 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 F900, F600, F200 and F810 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,

Dell PowerScale Data Sheet
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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

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<tr>
<th>SOFTWARE</th>
<th>FEATURE</th>
<th>DESCRIPTION</th>
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<tr>
<td>SMARTDEDUPE</td>
<td>Data management</td>
<td>Increase efficiency and reduce storage capacity requirements with deduplication of redundant data across multiple sources</td>
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<tr>
<td>CLOUDIQ</td>
<td>Monitoring</td>
<td>Simplify the storage management tasks of PowerScale, Isilon and other Dell Technologies infrastructure systems with proactive monitoring and predictive analytics from a single console</td>
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<tr>
<td>DATAIQ</td>
<td>Data management</td>
<td>Locate, access and manage data and gain a holistic view across heterogeneous storage systems with a single pane of glass</td>
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<tr>
<td>SMARTQUOTAS</td>
<td>Data management</td>
<td>Assign and manage quotas at the cluster, directory, user, and group levels</td>
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<td>INSIGHTIQ</td>
<td>Performance management</td>
<td>Performance monitoring and reporting</td>
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<td>SNAPSHOTIQ</td>
<td>Data protection</td>
<td>Protect data efficiently and speed the recovery of critical data with on-demand snapshot restores</td>
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<tr>
<td>SMARTPOOLS</td>
<td>Resource management</td>
<td>Tiered storage strategy to optimize storage performance and efficiency</td>
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<td>SMARTLOCK</td>
<td>Data retention</td>
<td>Protect your critical data against accidental, premature, or malicious alteration or deletion and meet compliance and governance needs</td>
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<tr>
<td>SMARTCONNECT</td>
<td>Data access</td>
<td>Enable client connection load balancing and the dynamic failover and failback of client connections</td>
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### SOFTWARE | FEATURE | DESCRIPTION
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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
SMARTRSYNC | 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 offer precisely 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
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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
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.