

DELL EMC ISILON SMARTPOOLS

Single file system for multiple tiers with automated data movement

ESSENTIALS

- Control storage costs without sacrificing performance or data protection
- Automatically move data to the ideal price/performance tier including flash, hybrid and archive tiers
- Seamlessly expand and upgrade tiers with no end-user impact
- Simplify management of multiple price/performance tiers with a single file system
- Improved efficiency by maximizing working set performance while minimizing overall cost per terabyte
- Policy-based automated file movement

The Dell EMC® Isilon® scale-out NAS storage platform gives you the power to scale capacity and performance, on-demand, transparently and without downtime. Now, you can right-size and accelerate your working set while automatically and transparently moving inactive data to more cost-effective storage using Dell EMC Isilon SmartPools™.

Isilon SmartPools allows multiple tiers of Isilon storage nodes to exist within a single file system, and unlocks the ability to aggregate and consolidate applications within a single storage pool. This gives you workflow isolation, higher utilization, and independent scalability—all with a single point of management.

SmartPools allows you to define the value of the data within your workflows based on policies, and automatically aligns data to the appropriate price/performance tier over time. Data movement is seamless—including in-flight read/write activity, locking semantics, backup application interaction and underlying file identification. **With file-level granularity and control with automatic policies, manual control, or an Application Programming Interface (API), you can tune performance and layout, storage tier alignment, and protection settings—all with zero impact to your end-users. SmartPools capability is native to the DELL EMC Isilon OneFS® file system, which allows for unprecedented flexibility, granularity, and ease of management. SmartPools leverages many of the attributes of OneFS, including data layout, protection and performance.**

Align data costs and performance to changing business demands

Easily deploy a single file system to span multiple tiers of performance and capacity including flash, hybrid and archive storage:

- Eliminate multiple storage silos with a single volume, single namespace for all tiers and workflows.
- Utilize policy-based automatic data movement within a single namespace, single file system without complex links, stubs, or manual data migration.
- Add capacity and/or performance in 60 seconds, enabling seamless expansion of any tier, on-demand.
- Consolidate and aggregate multiple applications into a single storage system, eliminating data movement and simplifying management.
- No professional services, specialized training or complex design is required.

Take advantage of a single file system that automatically adapts to business data and application workflows over time:

- Automatically align application needs of performance, capacity, and economics
- Respond to changes in workflow and demand for performance and capacity.
- Provide workflow isolation for critical applications without increasing management complexity.

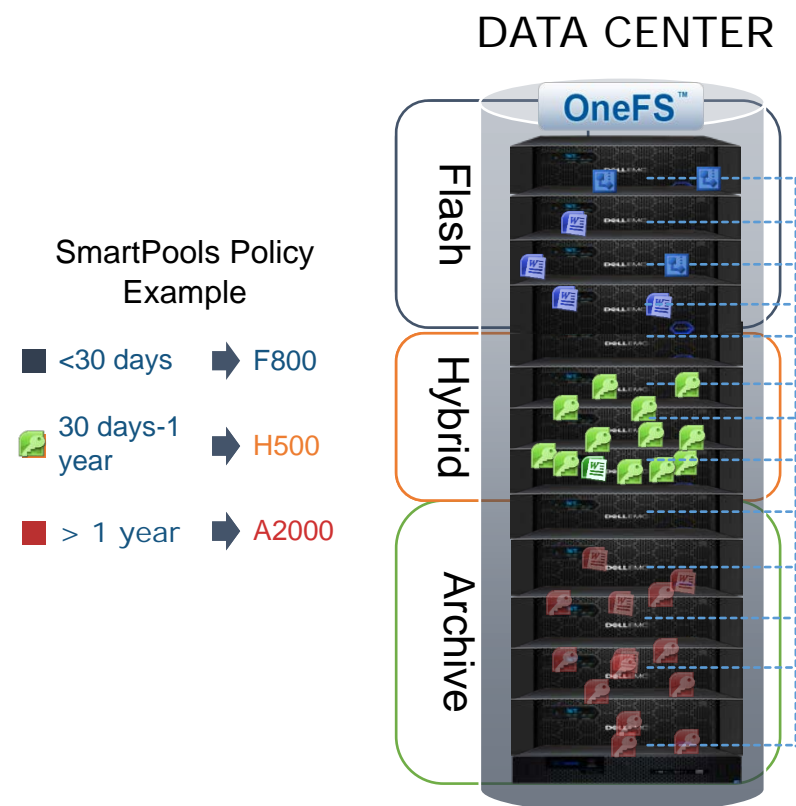
Align the business value of data with optimal storage performance and cost:

- Seamlessly integrate with optimized data placement including flash, hybrid, archive and cloud storage.
- Isilon pay-as-you-grow scalability maximizes utilization across tiers.
- Automatically align the value of data with optimal storage performance and cost without modifying applications or notifying users.

Automatically move files among different price/performance tiers

A tier is a “pool” of like nodes. You can combine flash, hybrid and archive tiers in the same cluster to suit your business needs. You can seamlessly replace older nodes and add new ones as a new tier in the same cluster. You can select the right nodes for your applications from the following:

ISILON F800, H600, H500, S210	IOPS intensive applications
ISILON F800, H600, H500, X410	High-concurrent and throughput applications
ISILON A200, NL410	Low cost, scalable nearline archive
ISILON A2000, HD400	Low cost, high density deep archive



Policy templates

Migrate data based on the policies that make sense to your business. Several default policy templates are available which you can use as is or modify. If you prefer, create your own custom policy via simple point and click process in the UI.

ARCHIVE	Move older files to older storage
EXTRA PROTECTION	Protect a subset of files at a higher protection level
PERFORMANCE	Assign files to the performance pool based solely on their path

Performance and protection options

As the policy templates above indicate, you can also customize performance and data protection specifications in your policies. You can raise the protection level for more critical data and optimize the level for random or sequential access as different workflows and data types dictate.

PERFORMANCE	Random or Sequential IO
PROTECTION	+1n, +2n, +3n, +4n, +2d:1n, +3d:1n, +3d:1n1d, +4d:1n, +4d:2n, data mirroring from 2x to 8x

Policy triggers

You can control data migration based on any combination of its age, size, file type, owner, or location or based on when the data was last accessed or modified. Policies can be combined and prioritized so your approach can be as broad brush or tuned as you require.

AGE	Creation date
SIZE	File size
TYPE	File type
OWNER	User attribute
LOCATION	Path
ACCESSED	When accessed
CHANGED	When changed

SmartPools is a powerful, simply way to deploy a single file system, single volume for multiple price/performance tiers with unparalleled simplicity of management, operation, and interoperability. SmartPools delivers seamless tiering from flash to hybrid to archive storage.

TAKE THE NEXT STEP

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

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