

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
- Seamlessly expand and upgrade tiers with no end-user impact

The EMC® Isilon® scale-out 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 EMC SmartPools™.

SmartPools allows multiple tiers of Isilon storage nodes to exist within a single file system, and unlocks the ability to aggregate and consolidate applications. That 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 absolutely 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 API interface, you can tune performance and layout, storage tier alignment, and protection settings – all with zero impact to your end-users.

ALIGN DATA COSTS AND PERFORMANCE TO CHANGING BUSINESS DEMANDS

Easily deploy a single file system to span multiple tiers of performance and capacity.

- 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 system design is required.

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

- Align application needs with performance, capacity, and economics – automatically.
- Respond quickly to changes in workflow and demand for new performance and capacity.
- Seamlessly adapt to workflow changes without affecting applications or workflows.
- Provide workflow isolation for critical applications without increasing management complexity.

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

- 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.
- Eliminate costly data migration and manual data movement between price/performance tiers.

AUTOMATICALLY MOVE FILES AMONG DIFFERENT PRICE / PERFORMANCE TIERS

STORAGE TIERS (“STORAGE POOLS”)

A tier is a “pool” of like nodes. Combine a performance tier (S-Series) and an archive tier (NL-Series) in the same cluster. Add a tier for latency sensitive data (S-Series with SSDs). Decrement older nodes and add new ones as a new tier in the same cluster.

S-Series	IOPS-Intensive Applications
X-Series	High-Concurrent and Sequential Throughput Workflows
NL-Series	Cost-Effective, Highly-Saleable Nearline Storage

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
VMware® Files	Set VMware® files for random access

PERFORMANCE AND PROTECTION OPTIONS

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

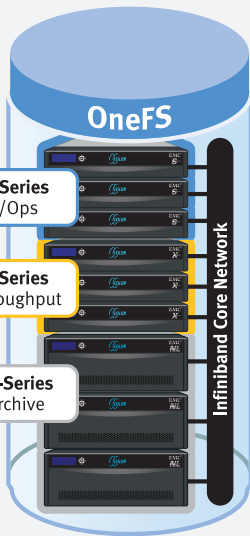
Performance	Random or Sequential IO
Protection	N+1, N+2, 2:1, N+3, N+4; data mirroring from 2x-8x

POLICY TRIGGERS

You can control data migration based on any combination of its age, size, file type, owner, location or when it 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

EMC Isilon SmartPools is a powerful, simple way to deploy a single file system, single volume for multiple price/performance tiers with unparalleled simplicity of management, operation, and interoperability.



- **Reduced Management:** Manage multiple price/performance tiers with a single file system and management point
- **Application Consolidation:** Combine multiple price/performance tiers into a single file system, single volume.
- **Policy-Driven Automation:** Automatically move data between tiers based on workflow-centric policies.
- **Investment Protection:** Seamlessly expand and upgrade price/performance tiers with no end-user impact.
- **Improved Efficiency:** Maximize working set performance while minimizing overall cost per terabyte.

CONTACT US

To learn more about how EMC products, services, and solutions help solve your business and IT challenges contact your local representative or authorized reseller—or visit us at www.EMC.com/isilon

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EMC Corporation
Hopkinton, Massachusetts 01748-9103
1-508-435-1000 In North America 1-866-464-7381
www.EMC.com

EMC Isilon Corporation
Seattle, Washington 98104
1-206-315-7500
www.EMC.com/isilon

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