SGI® DMF™

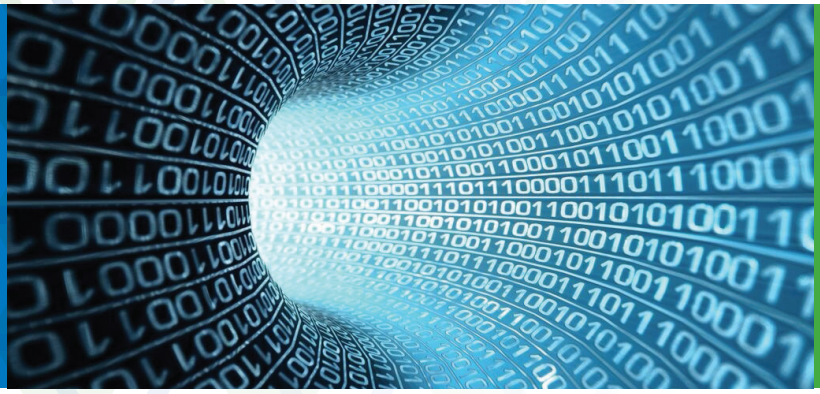
Software-defined Tiered Data Management Platform

Key Features

Policy Management & Active Data Migration

Storage Virtualization & Tiered Data Management

On-Premise & Cloud Storage



Store, Manage and Archive Petabytes of Critical Data

SGI's DMF provides a large-scale, storage virtualization and data management platform specifically engineered to manage and protect the petabytes of structured and unstructured fixed content generated by highly scalable and extremely dynamic high-performance computing (HPC) and data analytics (HPDA) applications.

DMF combines industry-leading traditional, cloud and cost-optimized storage devices with software-defined storage management features to create a powerful hierarchical storage management (HSM) environment. Because DMF integrates directly and transparently with the file systems that are already in use, no application or workflow changes are required for users or applications. As such, DMF is a major enabling technology component in support of data intensive compute environments by reducing storage costs, simplifying long term data management and improving the levels of data protection for critical projects.

DMF enables the intelligent blending of high-performance storage located close to the point of compute with cost-managed high capacity storage based on multiple technologies that can include power-managed SGI® DMF™ Zero Watt Storage™, object storage, cloud storage and library-based tape. As such, a DMF-based approach can yield as much as an 80% decrease in the cost of capacity data storage when compared to scaling out capacity using traditional Tier-1 disks - while also meeting target storage performance service levels.

With over 20 years in production customer use, SGI DMF is a proven platform for large scale and long term data management that significantly reduces the administrative burden and budget impact of managing the significant growth in compute-related data.

Product Highlights

As a policy-driven, centralized data management platform, DMF provides:

- Virtually limitless storage capacity and scalable I/O capabilities.
- Ability to migrate massive amounts of data between storage tiers while providing seamless data availability for users.
- Centralized user-friendly management and reporting interface for management simplicity and overhead reduction.
- Flexible infrastructure that allows for the ongoing integration of new storage tiers with no disruption to production environments.
- Provides certified adapters for numerous storage tiers that can include SSD, disk, RAID, SAN, object storage, private cloud, public cloud and library-based tape.
- Enhanced business continuance through integrated backups, data replication, and multiple disaster recovery strategies that replace system vulnerability with strengthened confidence and data protection.
- Rigorously tested, highly stable software suitable for use in multiple industries and with mission critical data sets.
- No hidden costs: perpetual one-time license fee.

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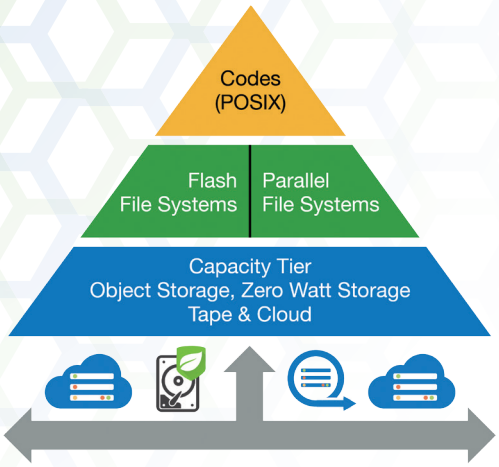
DMF Features and Benefits

DMF provides the most advanced and complete set of features for managing tiered storage including:

Flexible and Modular Architecture

The DMF architecture consists of interface, policy management, and storage management layers that integrate transparently within a standard POSIX file system environment and move data to alternative tiers of storage that can include cloud, object storage, disk-based capacity/nearline or cold storage (SGI DMF Zero Watt Storage) and library-based tape storage pools.

DMF simplifies the management of large data sets over time by enabling the integration and automated data migration to new storage technologies without any requirement for system downtime.



Automatic Data Migration

DMF continuously monitors and automatically migrates data to lower-cost storage tiers based on administrator-defined policies.

Volume-level policies allow storage capacity utilization to be maximized without heavy administrative overhead. High and low free space thresholds can trigger data migration to lower tiers, and file-level policies are used to automatically select the data to be migrated.

Users and applications always have uninterrupted access to data during file migration and restoration operations.

Automatic Data Recall For Agile Data Management

Data that has been migrated to lower cost tiers remains the appearance of being online. Files are automatically retrieved to primary storage on access by users or applications – or they can be pre-staged as needed in advance of job execution. Accelerated Access and Partial File Recall features allow users and application to access partial file data from primary disk storage while the remainder of the file is recalled – or the entire file can remain on a lower tier allowing users or applications to identify whether full recall is required.

High Availability and Data Integrity

DMF can be configured for high availability (HA) using an active/passive failover model that is designed to provide maximum data protection and availability, even as component failures occur. Granular data protection policies can direct the DMF system to make multiple copies of files, including offsite copies, for maximum data protection.

The DMF platform includes active validation and repair functionality that continually scrubs, validates and automatically repairs data in a manner that can greatly reduce system administrator workload as data sets grow over time.

Increased Throughput and Resiliency

DMF supports deployment models that can be based on a single server environment or HA server configuration – and the system enables throughput scalability using a Parallel Data Mover Option (PDMO) that allows multiple DMF data mover servers to operate concurrently. Using this PDMO approach, DMF solutions supporting massive throughput capabilities can be architected – or a relatively small system can be scaled over time – to add throughput capabilities as requirements grow.

User-friendly Web-based Administration

DMF provides a web-based administration tool to simplify management of DMF operations as well as to provide comprehensive reporting and statistics for the DMF operations. This allows administrators to tune the system to maximize its performance and to monitor the placement and movement of data over time as the system is in production use.

Limitless Scalability

Total volume of data managed by DMF is only limited to physical media capacity with no performance degradation and service interruptions as increased amounts of data are managed and new storage media are being added.

DMF Implementation

SGI Global Services can help develop, validate and implement your storage strategy. Experienced DMF Solutions Architects and certified Project Managers help streamline project execution with knowledge of HSM environments, best practice implementation techniques, and offer unique custom tools to optimize performance.

For More Information

For more information about how the SGI DMF solution can cost-effectively store, manage and protect your data, contact an SGI representative at 1-800-800-7441 or visit www.sgi.com.

About SGI

SGI is a global leader in high performance solutions for compute, data analytics and data management that enable customers to accelerate time to discovery, innovation, and profitability.

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