

EMC Intelligent File System Archiving Solutions for Network-Attached Storage

Dramatically improve information access, protection, and recovery time with automated file archiving solutions

Digitized information is pouring into businesses at a fast and furious pace. Where do you store it and how do you make important information accessible to your employees, vendors, and customers? Statistics show that today, as much as 80 percent of a company's primary storage is consumed by inactive or infrequently used information kept on expensive storage systems for referential or compliance reasons. Keeping this data on primary storage is costly and inefficient:

- Primary storage is typically more expensive
- Backups and recoveries take longer and contribute to storage consumption
- Application performance can suffer

To lower storage costs, reduce backup and recovery time, and meet regulatory requirements, many businesses are deploying a tiered storage infrastructure. Automating file management and the placement of information across primary and secondary storage tiers is quickly becoming a best practice in managing the digitized information explosion. Automated file archiving dramatically improves information protection and recovery time and supports additional business requirements such as compliance and retention by enabling businesses to move dormant files from primary storage to secondary storage.

A tiered storage infrastructure also frees up precious capacity on the primary storage tier. This automated file migration process is done transparently resulting in a virtually infinite online repository of information that cost-effectively leverages multiple tiers of disk-based storage. How can your business take advantage of these methods? EMC provides a complete intelligent archiving solution and an easy starting point.

EMC's intelligent archiving solutions leverage EMC Centera, DiskXtender, and Rainfinity

EMC intelligent archiving solutions include EMC Centera®, EMC DiskXtender® for NAS, and EMC Rainfinity® File Management Appliance. EMC Centera is the world's most simple, affordable, and secure repository for information archiving. As content-addressed storage (CAS), EMC Centera provides all the speed of disk with the authenticity of optical at a total cost of ownership (TCO) equal to or lower than tape.

EMC DiskXtender for NAS is an industry-leading, file system archiving application enabling policy-based, automated file migration from NAS platforms to EMC Centera. EMC Rainfinity File Management Appliance enables file system archiving functionality from Rainfinity NAS environments to EMC Centera. Through the use of these two solutions, DiskXtender for NAS and EMC Centera, or Rainfinity and EMC Centera, IT management organizations will lower primary storage TCO, meet backup windows and recovery time objectives, and improve service levels.

To help you understand how automated file archiving improves IT efficiency, EMC offers assessment services for optimizing your organization's storage environment. Using assessment services reports and guidance from EMC or an authorized partner expert, a customized action plan for your IT environment can be developed and executed.

EMC Centera—the world's most simple, affordable, and secure repository for information archiving

EMC Centera content-addressed storage provides single-instance storage and data retention capabilities that greatly enhance the effectiveness of file archiving in reducing overall storage requirements while ensuring data that needs to be retained is kept for the required period. This self-configuring, self-healing, and self-managing repository enables IT administrators to easily manage up to 50-times greater quantity of archived information than previously possible. And as a future-proof architecture, EMC Centera eliminates the technology dead ends of archiving to tape and optical. If you need more capacity, EMC Centera seamlessly scales without disruption. The benefits of EMC Centera for file system archiving are endless.

EMC DiskXtender for NAS—intelligent file system archiving for network-attached storage

EMC DiskXtender for NAS delivers a powerful, highly scalable, data management solution in Windows, UNIX, and Linux environments. Based on administrator-defined policies, DiskXtender for NAS automatically migrates inactive files from NAS systems to secondary storage devices, like EMC Centera. DiskXtender puts a small "stub file" on primary storage in place of a migrated file containing the file's attributes plus information about where it is located in the archive. To users and applications, DiskXtender-migrated files appear to be in their original locations and are quickly retrieved from the archive upon request. Alternately, DiskXtender permits individual files to be read directly from the archive to save retrieval time and space on primary storage.

Automated data management

DiskXtender provides direct support across NetApp and EMC Celerra® as primary or source storage and EMC Centera as target or archive storage. DiskXtender for NAS acts on policies created through an easy-to-use wizard, enabling tiered storage solutions for NAS that place files that meet administrator-defined rules on the EMC Centera platform. Files look local to the user but are actually archived on the fast-access EMC Centera platform. DiskXtender for NAS supports the EMC Centera API and takes full advantage of EMC Centera features such as single-instancing, file-retention periods, retention classes, and file pooling.

Improved backup and recovery performance and Increased ROI

By automatically archiving inactive files, DiskXtender for NAS reduces the amount of data on primary storage so that backups are on smaller active data sets. This results in shortening backup windows and increasing the likelihood that backup processes will complete. Recoveries from a backup only bring back active files, making them faster and easier to manage.

DiskXtender for NAS helps businesses realize significant savings and increased return on investment by reducing storage infrastructure costs, enhancing system performance, and simplifying data management. In addition, robust reporting capability within DiskXtender for NAS assists IT administrators in fine tuning file-migration policies.

EMC Rainfinity Global File Virtualization

File virtualization has rapidly become a critical enabling technology for NAS and CAS environments. EMC Rainfinity Global File Virtualization™ (GFV) is the only virtualization solution that can manage active and inactive files and scale to meet the needs of large organizations. Applications included in the Rainfinity platform include Performance Management, Capacity Management, Tiered Storage Management, Migration and Consolidation, Global Namespace Management, and Synchronous Replication and File Management. The File Management Appliance (FMA) can also be purchased separately.

The FMA optimizes primary NAS storage by automatically moving inactive files based on policies to less-expensive secondary storage, like EMC Centera. Archived files appear as if they are on primary storage making ongoing access completely transparent to applications and end users.

Rainfinity is based on a stateless architecture which embeds all metadata in the optimized 4–8 KB stub file left behind on the primary file system. Rainfinity provides direct support across NetApp, Celerra, and EMC Centera. When FMA is leveraged in conjunction with the GFV Appliance, Rainfinity provides unique intelligence to move stub files during migration and consolidation without triggering recall from the archive tier.

Increased infrastructure flexibility

With Rainfinity, you can archive files and perform a non-disruptive storage consolidation or manage the non-disruptive movement of active data across storage tiers.

Rainfinity will also collect various statistics in order to help you proactively manage your NAS environment. These statistics are also used with Rainfinity's tiered storage management application that relocates active content across storage tiers. Rainfinity's integrated applications reduce costs, increase service levels, save time, and increase the flexibility of IP storage infrastructures.

EMC File System Assessment

EMC File System Assessment helps you come to a better understanding of your file systems and allows you to gain insight into current utilization, growth trends, and problem areas. Using the assessment data and guidance from EMC or an authorized partner expert, a customized action plan for your organization can be developed. The planning discussion includes the combination of an archiving policy engine that is best selected based on your server environment, integrated to EMC Centera content-addressed storage. This solution combination allows static content to be moved off of production servers to a self-managed archive.

Your organization will obtain detailed information about each server, volume, and file in heterogeneous storage networks without requiring installation of a single server agent. Using industry-standard tools, EMC can identify capacity utilization, file age distribution, and space consumption by file types, last access, and modification time. Once the analysis is complete, EMC personally delivers this information in easy-to-understand reports that help you make fully informed decisions about your storage infrastructure and any changes needed.

How the assessment works

EMC will schedule time with you to scan one or more target storage resources using its agent-less file system discovery tool, VisualSRM™. This analysis can take as little as an hour without impact to your production environment. Then, EMC experts will group and classify your storage resources and scanned data to prepare an assessment package that includes in-depth reports and analysis on data and storage usage patterns and file aging.

Take the Next Step

This seamless integration of Rainfinity or DiskXtender with EMC Centera is available now. EMC Centera delivers online access with assured content authenticity at a total cost of ownership lower than a tape library. Add EMC DiskXtender or EMC Rainfinity and you have solutions that deliver best-in-class archiving features and benefits. To learn more about EMC intelligent archiving solutions and services, call your local EMC sales representative or visit our website at www.EMC.com.



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Solution Overview
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