



EMC Next-Generation Backup Solutions for Healthcare IT Environments

To enhance patient care, healthcare providers are deploying sophisticated clinical and diagnostic tools, resulting in online growth of patient information and images. At the same time, healthcare organizations need to comply with state, federal, and country regulations that mandate retention requirements and disaster recovery contingency plans. Many healthcare organizations are struggling to maintain these growing volumes of data within their existing budgets and are looking for new technologies and tools to streamline and simplify these processes—but without increasing their costs.

From Integrated Delivery Networks (IDNs), hospitals, surgical centers, to outpatient clinics, healthcare organizations of all sizes continue to struggle with backup and recovery processes to meet their recovery-point objectives (RPO) and recovery-time objective (RTO) goals, as digital information growth escalates. To deliver safe, accurate patient-care diagnosis and treatment, physicians require immediate access to historical patient information, including archived images and test results.

Although much of the content in the typical healthcare organization has not been accessed in over six months, many organizations still store this data along with their mission-critical data on higher-cost storage platforms, eventually archiving this patient information on tape. For many healthcare organizations, a single tier of networked storage and traditional tape-based backup and archiving are costly and no longer viable strategies—serving only to increase backup and restoration times, risk, and complexity, straining already burdened IT staffs. To ensure effective and affordable data protection, healthcare organizations are deploying tiered networked storage and next-generation, disk-based backup and recovery solutions that improve reliability, availability, and performance. These enterprises are also taking a more strategic approach to the archiving of digital patient assets.

Integrating the backup, recovery, and archiving processes

Healthcare organizations are gaining positive operational, business, and financial impacts by moving inactive and final-form data to an online archive, and in the process, shrinking the size of their production data. The remaining smaller data set of production information can now be more quickly backed up to disk, at the same time, accelerating restore capability.

Recovery requirements must also be considered with both the appropriate RPO and RTO goals for your organization identified. Retrieval time, service-level, and availability requirements of archived information must also be considered. Achieving your business continuity goals requires a combination of hardware, software, and services to best deliver the appropriate service levels.

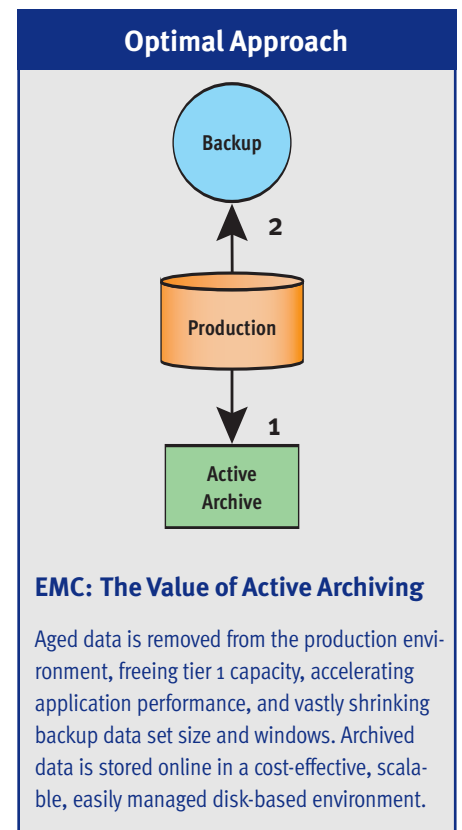
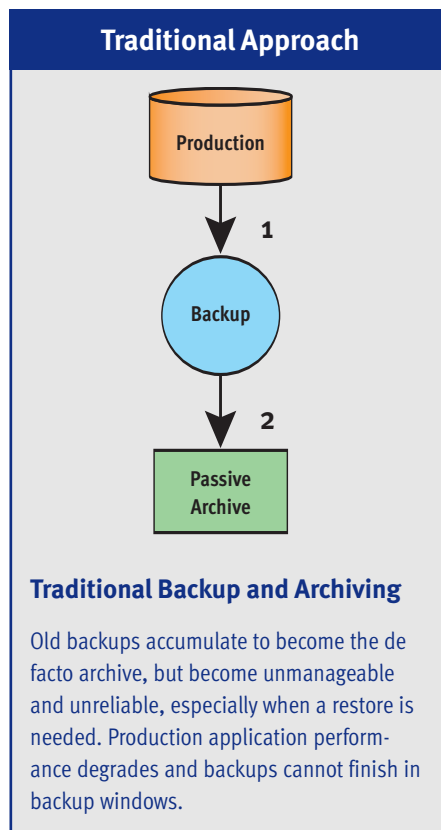
A benefit of moving inactive data out of the production environment occurs when information is accessed, either via a restore request as part of a recovery process or via a retrieval request from the archive. And this approach eliminates the need to load multiple tapes, as well as concern whether the correct tape has been identified, the media has been damaged, and is in the right sequence. Critical patient information is delivered in a fast, efficient manner to those care givers that need it immediately.

Gaining the benefits of smaller backup windows and higher performance and reliability of restores translates directly to higher information and application availability. And it also eliminates the need for “planned downtime” in order to perform overnight backup procedures. By storing and managing information more intelligently, production application performance is improved and more consistent over time, with the financial benefits of tiered networked storage is now realized.

Next-generation backup from EMC

EMC offers a wide range of automated disk-based backup and archiving hardware, software, and services to meet and exceed healthcare provider service-level requirements. Healthcare organizations can store more intelligently with:

- **SAN:** EMC® CLARiiON® with ATA drives or EMC Symmetrix® with low-cost Fibre Channel drives—for back up of consolidated storage infrastructures with SAN-connected backup servers.
- **LAN:** EMC NS Series with ATA drives for distributed infrastructure with LAN-connected backup servers.
- **Disk Library:** EMC Disk Library, tape emulation backup/restore appliance for consolidated backup.
- **CAS (content-addressed storage):** An active archiving solution for online fixed content that’s simple, safe, and secure.



Intelligent information management

EMC offers a wide range of backup and recovery software options to meet the demanding clinical care and regulatory needs of healthcare organizations. For example, deploying EMC NetWorker® software as your backup approach provides performance improvements over tape's serial operations. The EMC NetWorker family provides an intuitive user interface and policy-based engine to help automate and simplify the backup and recovery process. Powerful snapshot management provides instant data protection and rapid recovery by giving you complete control of EMC and third-party snapshot tools.

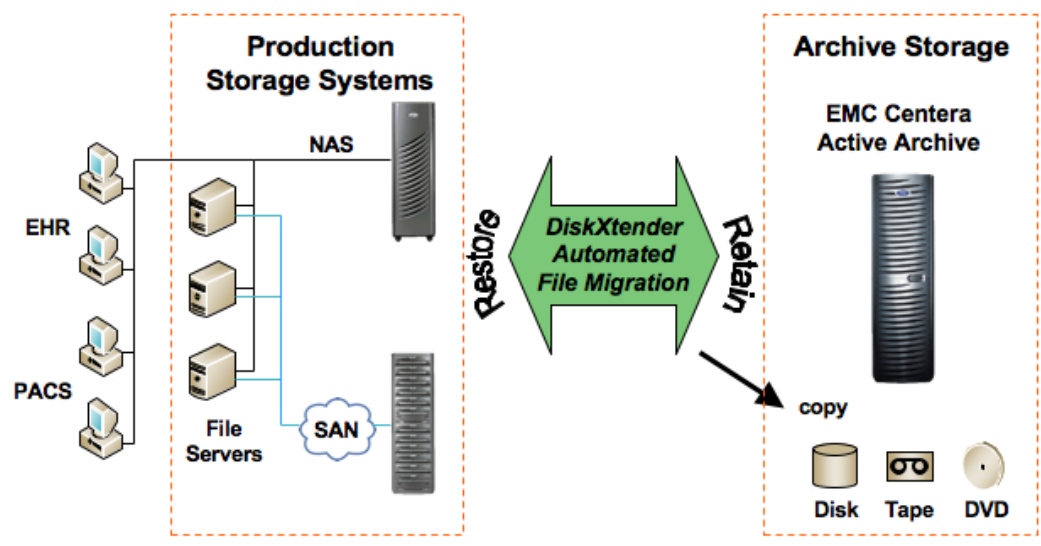
Healthcare organizations can improve system performance by performing operations both for simultaneous backup and recovery as well as backup and cloning. NetWorker further improves performance through integration with the EMC Disk Library, a family of virtual tape library solutions. An EMC Disk Library can control your entire tape pool (both virtual and physical) through a single application interface and EMC Disk Library performs key functions such as scheduling, cloning, copying, and moving of leading backup and restore software—including EMC NetWorker, IBM Tivoli Storage Manager, and Symantec NetBackup.

Active archiving of medical information and patient images

Effective archiving requires moving data from the production environment to a safe and secure, lower-cost, highly automated environment. The archive solution must also be integrated with your clinical and business applications to offer a consolidated and secure online repository. EMC Centera® offers healthcare users the following benefits: self-managing automation, self-healing protection, single-instance storage for greater efficiency, and record-level auditing.

Active archiving solutions from EMC incorporate automated, rules-based file movement between production servers, network-attached storage (NAS), or storage area networks (SANs) to archival storage tiers. Inactive information or content in its final form is moved off primary storage to more cost-effective storage platforms. This movement frees up server capacity and reduces the amount of data being backed up in accordance with your defined backup policies.

Leading healthcare application providers have tightly integrated their clinical and business applications using the EMC Centera API. EMC also enables the movement of information through the use of policy-based software engines such as EMC DiskXtender®, which also provides an API. For file system archiving, healthcare providers can leverage EMC DiskXtender as the data migration engine to automatically migrate inactive images, files, records, and DICOM content to EMC Centera.



The EMC Global Services organization helps healthcare organizations identify the right hardware, software applications, and information management tools to create an intelligent information infrastructure. The EMC Backup Assessment Service helps healthcare organizations analyze components of their existing data center backup infrastructure. Once the current environment is analyzed, recommendations are made and potential benefits described for redesigning the backup architecture.

Next-generation backup benefits

EMC solutions for improving and optimizing back up, recovery, and archiving provide your healthcare organization with:

- Faster backups and restores to meet more-aggressive backup windows
- Policy-based, automated management of retention and deletion of information assets
- Reduced business risk with built-in hardware redundancy, RAID protection, and high availability to ensure data is restored quickly—and accurately
- Simplified management by moving inactive information into an archive
- Increased application uptime and performance by dramatically reducing backup windows
- Consistent application of data retention policies for compliance
- Automated, scalable archiving processes with assured content authenticity and single-instance storing

Take the Next Step

To learn more about EMC Next-Generation Backup Solutions for Healthcare IT Environments, please contact your local EMC account manager or visit www.EMC.com/healthcare.



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Solution Overview
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