Solving **Healthcare** Data Challenges

Rising Volumes of Medical Data

Medical data comes in various formats including clinical notes, diagnostic tests, genome sequencing, and medical images. The massive growth in imaging volumes and file sizes has placed an immense burden on storage requirements. It's no surprise that healthcare IT teams are constantly challenged to balance capacity planning and storage costs.

Rising Cost of Downtime

According to Ponemon Institute[1], the average cost of a data center outage in 2016 was $740,357, up 38% from 2010. But while business continuity is always important, it's crucial for healthcare organizations. Here, CIOs are under intense scrutiny because of the sensitive nature of data, while at the same time, their organizations are under pressure to reduce the financial impact of downtime. Loss of data availability and downtime can occur in several ways, from accidental file deletion, hardware failure, ransomware, to natural disasters. Hospitals are especially vulnerable to ransomware attacks and they are the number one target for cybercriminals. Globally more than 100 million patient records were breached in 2016, as reported by IBM[2]. As attacks continue to rise, liability ransomware insurance increases (per medical record). It's becoming even more crucial for healthcare IT to implement robust measures for data protection.

OneXafe Scale-out Storage and Data Protection Platform

StorageCraft OneXafe® is a converged data platform that unifies enterprise-class data protection with scale-out storage in an easy-to-use, configurable solution. OneXafe eliminates hospitals' runaway storage costs and reduces data management complexity. With a unique scale-out, object-based NAS storage appliance, OneXafe can be utilized as storage for unstructured data, archiving (e.g., medical image repository), and a target for backups. OneXafe solves common storage pain points: complicated installation, cumbersome storage management, lack of data security and forklift upgrades.

OneXafe offers organizations the option to enable and configure enterprise-class data protection with secondary storage. When this option is enabled, OneXafe provides healthcare organizations with comprehensive backup and recovery protection. This powerful data protection delivers industry-leading recovery time objectives (RTOs) and recovery point objectives (RPOs) for fast and reliable recovery of up-to-date medical data and business continuity.

In the case of disaster, OneXafe ensures business continuity with a complete, orchestrated virtual failover to the cloud in one click, when used with our Cloud Services. OneXafe's tight integration with the cloud makes recovery of the entire infrastructure simple, quick, and seamless, while offering the highest service level agreements (SLAs) with one throat to choke.

Business Benefits

- Scale-out Storage Dynamically
- Optimize Storage Utilization
- Reduce TCO
- Protect Data Reliably
- Safeguard Against Ransomware
- Recover Rapidly
- Recover Flexibly – P2P, P2V, V2P, V2V
- Simplify Deployment and Management

Customer Testimonial

"To be honest with you, I did [consider paying the ransom]. On the first day, absolutely. I really could not afford to be without those files."

– Jason Rolla, CTO, Christopher Rural Health

Scale-out Storage on the Go

Unlike other storage solutions with limited scalability, OneXafe offers a limitless pool of scalable capacity.

- **Expand storage seamlessly**: Healthcare IT teams can expand storage dynamically and scale granularly, one drive at a time, or by adding multiple OneXafe appliances, all without any configuration changes to the application.

- **Minimize storage requirements:** OneXafe keeps an organization's storage footprint in check with powerful data reduction technologies, such as inline deduplication and compression. Using efficient variable-length block level deduplication, OneXafe delivers impressive data reduction rates of up to 20:1.

- **Reduce storage costs:** OneXafe eliminates costs caused by over-provisioning. With high data reduction ratios, it reduces the costs of expanding hardware and operational expenses, lowering the cost per TB even further. OneXafe allows IT teams to purchase enterprise class drives at retail pricing, driving down costs even more without the vendor markups.

Ensure High Availability and Continuous Data Protection

The critical nature of medical data demands a fast recovery with up-to-date patient records. This necessitates protecting, backing up, and recovering mission-critical information rapidly.

- **Backup everything and recover instantly:** With OneXafe, healthcare IT teams can backup entire systems and can recover medical files and folders in seconds or entire systems in minutes. For instant recovery, IT teams can boot backup images as VMs in milliseconds with VirtualBoot technology. In the event of a system failure, such as a crashed server, IT teams have the flexibility to recover rapidly to any type of server or as a VM in any hypervisor. For remote back up, IT teams can do a one-click failover to StorageCraft Cloud Services and restore data in minutes.

- **Safeguard medical data:** OneXafe takes continuous and immutable snapshots automatically every 90 seconds for the first hour, then on an hourly, daily, weekly, monthly, and yearly. Should a ransomware attack occur, encrypting the data and corrupting the primary file system, these snapshots are completely unaffected, immune from any modification or deletion.

Simplify Data Storage and Recovery Management

Healthcare IT teams, scrambling to keep up with the rapid data growth, inevitably create too many storage islands. Resulting in management complexity, operational inefficiencies, and increased total cost of ownership (TCO). Furthermore, implementing the various policies set by federal regulations like Health Insurance Portability and Accountability Act (HIPAA) can be quite complex; as this requires organizations to manage policies for image retention, backup, and disaster recovery.

- **Eliminate complexity:** IT teams can add scale-out capacity to the OneXafe storage infrastructure without disruption to file and application services. To help organizations comply easily with retention policies, OneXafe provides flexible policy-based administration for backup and retention.

- **Control globally:** IT teams can manage OneXafe from any browser with StorageCraft OneSystem, our powerful and intuitive cloud-based management service. OneXafe consolidates the components for managing storage, local backups, onsite and offsite replication, disaster recovery as-a-service (DRaaS), and their corresponding retention schedules all in a single place.

- **Optimized, simple workflows:** A single unified management workflow for the entire data protection and disaster recovery (DR) lifecycle.

By integrating data protection and scale-out storage from the ground up, OneXafe eliminates the complexity related to managing and protecting data. It removes the need for siloed solutions, minimizes costs incurred from standalone hardware and software solutions, and eliminates redundancy in management.

Storage Features

- Distributed file system
- Object-based storage
- All-flash (performance) or HDD-based (capacity)
- Encryption-at-rest with AES 256 (HIPAA requirements)
- Inline deduplication, compression, flexible replication

Data Protection Features

- SLA-based data protection
- Host-based VM protection
- Agent-based protection
- Instant recovery with VirtualBoot (milliseconds)
- App-consistant restore
- Hardware independant recovery
- Modern, optimized console experience
- Unified data protection lifecycle management
- Enhanced inflight data verification
- Analytical reports
- Retained metadata for improved recovery

DRaaS Features

- One-click failover to StorageCraft Cloud Services
- Purpose-built DR cloud solution
- Replication and DR as a Service
- Orchestrated on-cloud virtualization
- Highly customizable
- Seed/BMR drives & web download
- High availability - 99.999% uptime
- Self-service, one-stop portal

[1] Ponemon Institute 2016 Cost of data center outages
[2] 2016 IBM X-Force Cyber Security Intelligence Index

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