



## **BENEFITS OF CLOUD-BASED STORAGE IN HEALTHCARE**

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## INTRODUCTION

As healthcare records and clinical workflows are increasingly digitized, hospital IT departments are dealing with data volumes they never before considered, much less prepared for. This ocean of data not only consumes on-site storage as fast as IT can expand it, but also must be stored in accordance with stringent compliance regulations regarding security, availability and accessibility.

Healthcare IT has always been on a tight budget, but now even those dollars are shrinking as hospitals rush to modernize facilities in order to compete in a new consumer-driven market. IT departments must find a way to manage the enormous volumes of data that threaten to overwhelm their infrastructures while keeping it all available, accessible and safe. The question is how to do more—and do it better—with less.

## EVOLVING HEALTHCARE DATA BACKUP AND ARCHIVING REQUIREMENTS

In the past, healthcare data backup and storage was fairly simple. IT departments could archive data without too much concern for its longevity or future access. It's hard to believe now, but there was once a time when there was no such thing as high-availability requirements, and security concerns were virtually nonexistent. As a result, tape backup and off-site storage was a perfectly acceptable solution.

Today, health data must be kept secure and available for indefinite future access. There are state and federal regulations that come with hefty noncompliance penalties for data retention and downtime violations and data loss. Data is needed regularly and must be maintained for increasingly longer periods

of time, anywhere from decades to forever. Data quantity and quality of access are only two of the primary IT challenges. Security threats are growing exponentially as black market data becomes more valuable and ransomware becomes a lucrative endeavor.

Access to patient records and other data is no longer a workflow tolerant of delays. Clinicians need access to digitized records unpredictably and immediately. Digital records have not only become important to better productivity and workflows, but are now critical for improved patient care.

## THE TROUBLE WITH TAPE

As a result of these evolving demands and requirements, tape-based backup and storage is no longer a viable solution. Though often cheaper, archiving or backing up to tape can result in unreliable restoration, severe access delays and potential data loss.



It is clear healthcare IT needs a modern approach to data storage and access, but perennial budget challenges can hinder policy and technology adoption. For example, hospital data centers are the lowest priority for floor space and capital expense dollars, leaving IT with unpredictable access to funding. Because IT does not drive patient revenue in the way new hospital wings or diagnostic equipment does, getting funding for modernized IT can be all but impossible. Overall, healthcare IT budgets are tight and hospital IT departments are understaffed and underequipped.

## SOLVING HEALTHCARE IT CHALLENGES WITH CLOUD-BASED STORAGE

Cloud-based storage can solve many modern healthcare IT challenges. Properly managed, cloud storage provides better backups, dependable disaster recovery and improved, accessible storage and archiving.

Recurring difficulties in managing and validating backups are one of the main drivers for the adoption of cloud-based storage. Without it, healthcare IT departments still struggle to perform backups and then validate their viability for restoration. Many are still storing all their backup copies on premises, which violates regulations that require

hospitals to have a remote copy of healthcare data for recovery in the event of a disaster.

### Cloud-based backup:

- Gets data out of the data center
- Provides higher availability than tape
- Is more secure
- Provides protection against ransomware attacks by limiting access to application-specific APIs
- Provides immediately accessible data
- Is instantly scalable
- Allows organizations to instantly restore byte-, block- or file-level data
- Operationalizes expenses so IT doesn't have to compete for Capex dollars

Cloud-based storage and backup also enables hospitals to develop a dependable disaster recovery strategy, a compliance element required by the Health Insurance Portability and Accountability Act (HIPAA). As if noncompliance penalties were not economically crippling enough, downtime can cost hospitals up to \$8,000 a minute in patient revenue and can have a massively negative impact on patient trust.

Patient care also relies on technology, and any amount of downtime can have dangerous implications in acute care situations. With tape backup, getting back online requires retrieving data from the off-site storage vendor, which can take days, and then building a new system using in-house staff.

While cloud-based storage is an enabling element of solving these issues, it is not itself a holistic solution. Healthcare still needs intelligent applications to back up to cloud storage, archive infrequently accessed data, and track the location of all patient records and data to effectively service end-user requests. This technology, though, can be an operational burden, which mere cloud

storage does little to abate. Sourcing cloud-based storage from a managed service provider creates a more complete solution by offloading many of the operational difficulties.

### **DISASTER RECOVERY:**

With managed cloud services, responsibility for recoverability shifts to the service provider. In a disaster, experts will restore the system immediately. Since IT will be running workloads out of a cloud data center instead of an on-site data center, in a disaster, all the hospital needs to stay productive is an Internet connection. After the disaster, the production system is restored to the last successful backup and normal operations resume quickly.

With managed cloud services, service providers test the backup and recovery infrastructure to ensure it will work when needed. It is a small but critical detail; most on-site disaster recovery plans are never tested and often fail. By shifting restoration responsibility to managed service experts, hospital IT is free to deal with other aspects of disaster response, including the well-being of their own families.

### **BACKUP:**

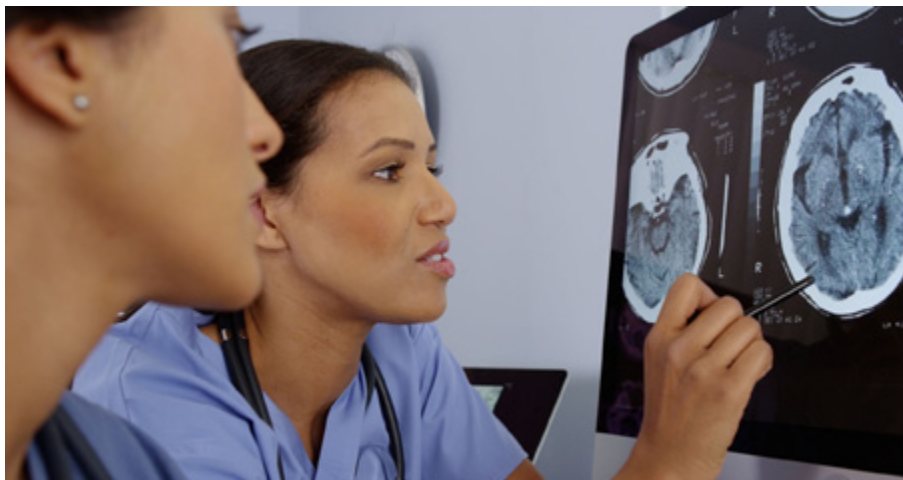
Managed cloud-based backups build on the economic model, scalability and reliability

of cloud-based storage by also solving the operational burdens of performing, troubleshooting and validating backups. A service provider can assume the responsibility for data encryption, protection, security and retention, enabling compliance and peace of mind.

### **ARCHIVING:**

Using cloud-based storage to build an archive for information lifecycle management solves many operational challenges. Implementing such a strategy can help eliminate shadow IT, or infrastructure installed without approval. Because it's fast, DIY storage is tempting for departments that generate massive amounts of data. However, it plagues the hospital IT department, which learns about DIY storage only when it breaks or more storage is needed. As such, it is neither secure nor compliant, and it often isn't compatible with other systems.

Cloud-based archive systems give departments the on-demand capacity they want without putting the hospital at risk of noncompliance or data loss. This approach eliminates the need to guess what long-term growth will be, which can result in departments overpaying. As departments need to scale, they'll pay only for what they use.



## CLOUDWAVE OPSUS: MANAGED SERVICES FOR OPERATIONAL SUSTAINABILITY

CloudWave provides on-premises and cloud-based managed services solutions designed specifically for healthcare. OpSus Backup, OpSus Recover and OpSus Archive can help hospitals achieve operational sustainability, no matter what.

OpSus Backup allows healthcare IT to leverage cloud backup as a service to protect and recover data. OpSus Backup is fully managed, so in-house hospital IT does not have to worry about cloud backup infrastructure, implementation, monitoring, testing or management.

OpSus Recover is compliant, fully managed, cloud-based disaster recovery as a service. OpSus Recover allows hospitals to recover critical data and restore operations quickly in the event of an outage or disaster.

OpSus Archive is a cloud-based storage solution purpose-built to meet the specific compliance requirements of hospitals. OpSus Archive is a secure, economical approach to archiving data that gives organizations on-demand scalability as their needs change.

## CONCLUSION

Hospital IT departments are dealing with data in volumes never before imagined. This onslaught of data requires secure, compliant storage and archiving, a disaster recovery plan and instant accessibility. IT must find a way to meet these requirements and expectations, even without access to consistent or plentiful capital funding. CloudWave cloud-based managed services such as OpSus Backup, OpSus Recover and OpSus Archive can provide low-cost, reliable backup, disaster recovery and archiving for hospitals.

Cloud solutions are helping hospitals by providing a positive business impact on resource availability, economics, and compliance. CloudWave helps healthcare organizations meet challenges and transform IT with OpSus Cloud Services and on-premises solutions designed for the hybrid cloud. Visit [www.gocloudwave.com](http://www.gocloudwave.com) to learn more.

CloudWave is helping hospitals transform IT with the OpSus Healthcare Cloud, built on a proven platform that includes HPE technology to minimize risk and deliver excellent performance.

