



Disaster & Disruption: Data Protection & Recovery Planning

January 10, 2018
2 pm – 3 pm ET

Agenda

- Welcome and Introductions
 - Claudia Ellison, Program Director, eHealth Initiative
- Discussion & Comments
 - Ken Sheppard, IT Solutions Manager, McKesson
 - Steven Ramirez, Senior IT Solutions Consultant, McKesson
 - Mike Wilson, CTO, Datatility
- Questions & Answers

Housekeeping Issues

- All participants are muted
 - To ask a question or make a comment, please submit via the Q&A feature and we will address as many as possible after the presentations.
- Technical difficulties:
 - Use the chat box and we will respond as soon as possible
- Today's slides will be available for download on eHI's Resource page
www.ehidc.org/resources

Our Mission

eHealth Initiative's mission is to serve as the industry leader convening executives from multi-stakeholder groups to identify best practices to transform healthcare through use of technology and innovation. eHI conducts, research, education and advocacy activities to support the transformation of healthcare.



Multi-stakeholder Leaders in Every Sector of Healthcare



eHealth Resource Center Available With Best Practices & Findings

Best Practice Committees contribute to the eHealth Resource Center www.ehdc.org/resources which provides assistance, education and information to organizations transforming healthcare through the use of information, technology and innovation. The Resource Center is a compilation of reports, presentations, survey results, best practices and case studies from the last 16 years.



Save the Date: February 7 – 8, 2018
Top of the Hill, Washington, DC

eHealth Initiative Executive Summit



Convening Executives To Research & Identify Best Practices

Best Practice
Committees
Identify &
Disseminate
Success Stories



**VALUE &
REIMBURSEMENT**



DATA ACCESS & PRIVACY



**WORKFLOW &
PATIENT EXPERIENCE**

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HEALTHCARE

DISASTER & DISRUPTION: DATA PROTECTION & RECOVERY PLANNING

How BCDR planning and a Hosted Storage solution will
save you money and deliver peace of mind

1.10.2018

Today's Speakers

Ken Sheppard

IT Solutions Manager
Kenneth.sheppard@mckesson.com

Information technology professional with 30 years of experience over a diverse range of information systems and technology platforms. Extensive background in technology implementations: Business Continuity/Disaster Recovery, computing platforms, storage, network, and cloud solutions

Steven Ramirez

SR. IT Solutions Consultant
Steven.ramirez@mckesson.com

A seasoned healthcare technology professional. Steven has extensive experience developing and managing enterprise IT risks/security, IT compliance and Business Continuity/Disaster Recovery solutions that meet specific client objectives and address emerging risks.

Mike Wilson

CTO, Datatility
mwilson@Datatility.com

Mike Wilson brings more than 16 years of systems, network and colocation experience to the team. He has held senior engineering and management positions with enterprise companies and service providers, and has a thorough understanding of what customers expect from their providers and how to deliver the right solution.

Today's Discussion

- Current State of Healthcare
- Recovery Solutions – What suits you?
- Choosing the “Right” BCDR Solution – Client Examples
- Data Protection - Hosted Storage Overview & Benefits
- Hosted Storage – Solution Overview
- Client Examples
- Q&A

Current State of Healthcare



Hurricane Harvey: Houston-area hospitals preparing to evacuate ...

ABC News - Aug 27, 2017

Hospitals in the Houston area are preparing to make evacuations as flood waters rise in the wake of Hurricane Harvey. Water flooded the ...

The Houston Hospital Running Out of Food

In-Depth - The Atlantic - Aug 28, 2017

Hospitals scramble as Harvey forces patient evacuations

Local Source - Chron.com - Aug 28, 2017



Puerto Rico Hospitals Are Struggling To Provide Care After Hurricane ...

www.npr.org/.../puerto-rico-hospitals-are-struggling-to-provide-care-after-hurricane-ma...

6 days ago - Hospital officials in San Juan, Puerto Rico say they are operating in crisis mode after Hurricane Maria. With only emergency power, doctors are struggling to provide medical care as needs grow daily. ... A week after Maria, they're operating on just emergency generator power ...

Recovery Solutions – What model suits you?

Seek a tailored BCDR solution to meet the unique needs of your organization. Consider these factors:

- △ Enterprise Strategy
- △ Risk to the organization
 - Are you located in a hurricane or earthquake zone?
- △ Risk appetite and downtime tolerance
 - Impact to patient care/safety
 - Financial Impact
- △ What is more important?
Uptime/availability vs. data protection
 - Uptime/availability (low RTO)
 - HA and Enhanced Recovery
 - Data Protection (low RPO)
 - Offsite (hosted storage)
 - Care continuance

Know your infrastructure (What's under the hood?)

- △ What is the current state of your infrastructure?
- △ Virtual or Physical
 - VMware tools?
- △ Backup tools
- △ Dual data centers
- △ Network
 - Stretched
 - Dual providers
 - VIPs

Choosing the right solution:

System Recoverability



Hospital A

Facility Overview

- 651 Bed Teaching Hospital (Trauma 1)
- 400k Studies Per Year
- Impact of 24 hr outage \$800k+
- 5 total Virtual Application Servers
- 1 Virtual Database
- **Medium RTO/RPO**
 - RTO: 4-6 hours
 - RPO : >15
 - **RTA: 5 hours**

DR Solution: CARE CONTINUANCE

- Supplied "warm database"
- Data backed up every morning at 5:00 am to alternate site as well as incremental backups every two hours (transaction logs).
- In event of disaster, Hospital would need to re-synch from modalities to ensure no data loss was experienced.
- Virtual App servers 1-1 in DR
- Recover Point used to synchronize PRD App server configurations

Choosing the right solution:

System Recoverability



Hospital B

Facility Overview

- 4- Hospital Health System
- 800k+ Studies Per Year
- Impact of 24 hr outage \$1 million+
- 8 total Virtual Application Servers
- 1 Virtual Database
- **Low RTO/RPO**
 - RTO: 4-8 hours
 - RPO : Near 0
 - RTA: 1 hour

DR Solution: VMWARE SITE RECOVERY MANAGER

- Database - Currently, 30 minute replication (client) at the 15 and 45 minute marks and hourly transaction log (McKesson)
- App server specs replicated via VMotion to PRD and DR in synch

Choosing the right solution:

System Recoverability



Hospital C

Facility Overview

- Rural Hospital
- 25k+ Studies Per Year
- Impact of 24 hr outage \$95k
- 2 total Physical Application Servers
- 1 Physical Database
- Medium RTO/ Low RPO
 - RTO: 4-8 hours
 - RPO : Near 0
 - RTA: 6 hour

DR SOLUTION: CARE CONTINUANCE & HOSTED STORAGE

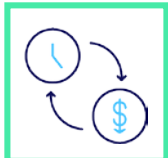
- CC - warm database. Data backed up nightly to alternate site as well as incremental backups every two hours (transaction logs). In event of disaster, Hospital would need to re-synch from modalities to ensure no data loss was experienced.
- Hosted Storage – houses LTA

Hosted Storage

Why is it important?



Consolidates legacy storage, backup and replication from multiple sources to a single point out to the cloud.



Reduces overall costs while providing a sustainable growth model.



Provides an off site enterprise disaster recovery solution for unstructured data.



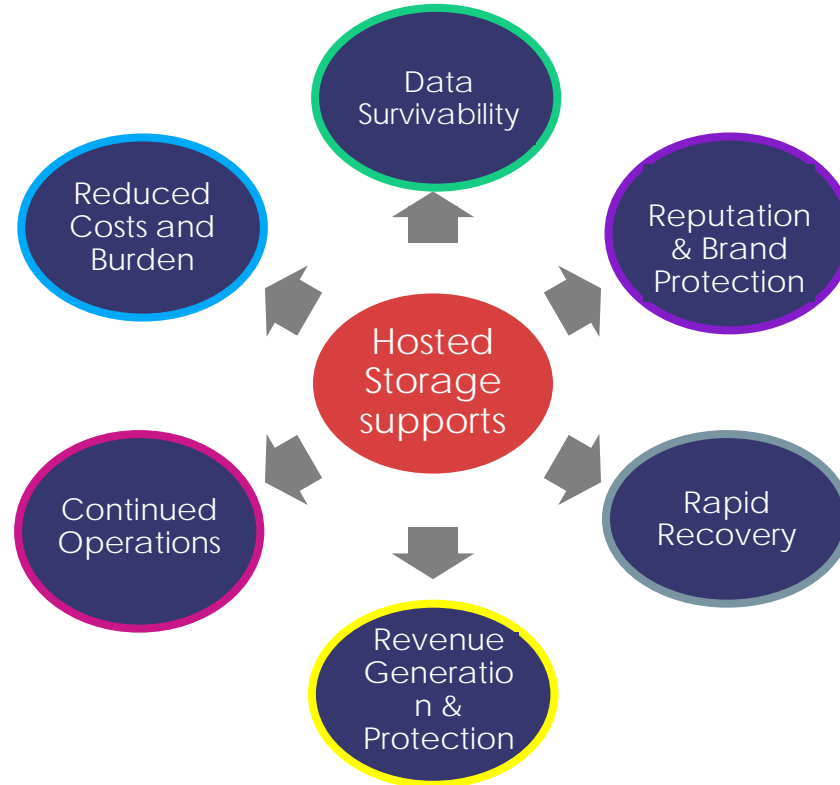
Meets HIPAA security requirements with FIPS 140-2 certified security on-premises and in the cloud.

Traditional Storage Model vs. Change Healthcare Hosted Storage

	Traditional Storage Model	Change Healthcare Hosted Storage Service
Hardware Solution	Onsite	Hybrid Cloud
Management	Client managed	Fully managed
Hardware Refresh	Every 3-5 years with migrations	Every 3-5 years, no migrations required
PHI Protection	Data not encrypted at rest	Data encrypted at rest, in-flight and in the Cloud
Archive Costs	Data migration/move services every time archive infrastructure changes	Pay only for what you use. Flexible “pay as you grow” model.
LTA and DR	May have different solutions for each	Unlimited capacity, data dispersal model for DR

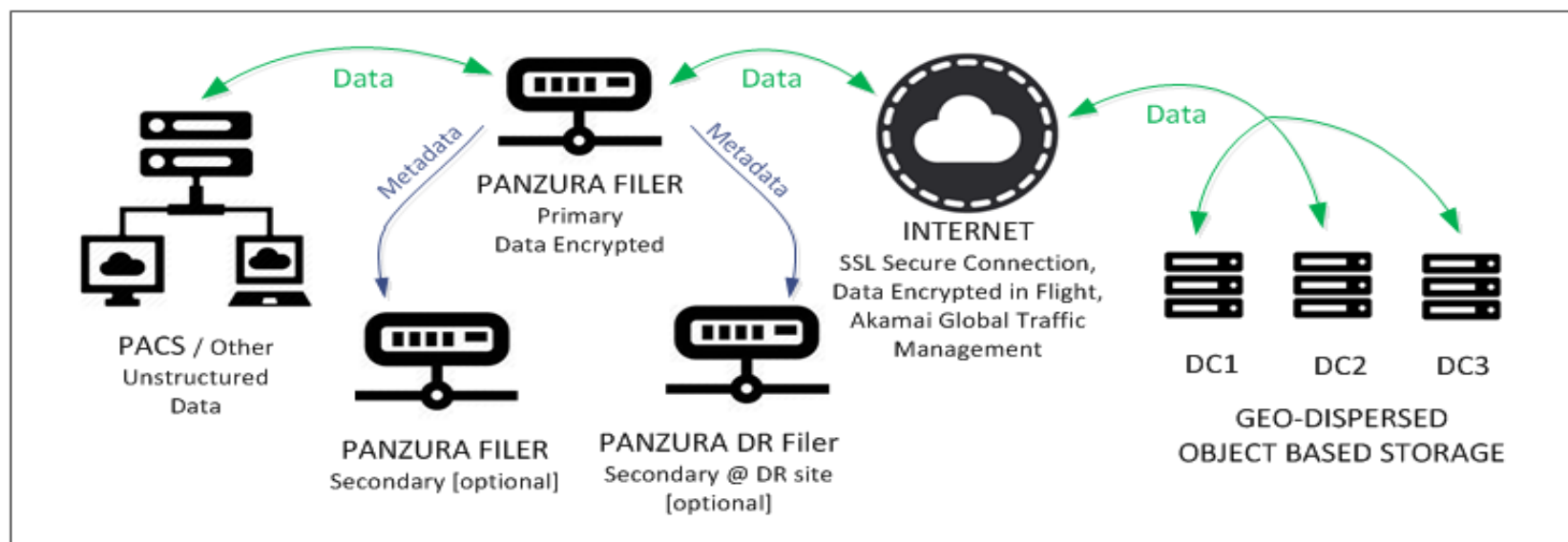
Healthcare providers must fully consider their storage options and the criteria above when seeking out a cost-effective solution to accommodate their data growth and critical data protection needs.

Hosted Storage Service is Vital to Healthcare Organizations

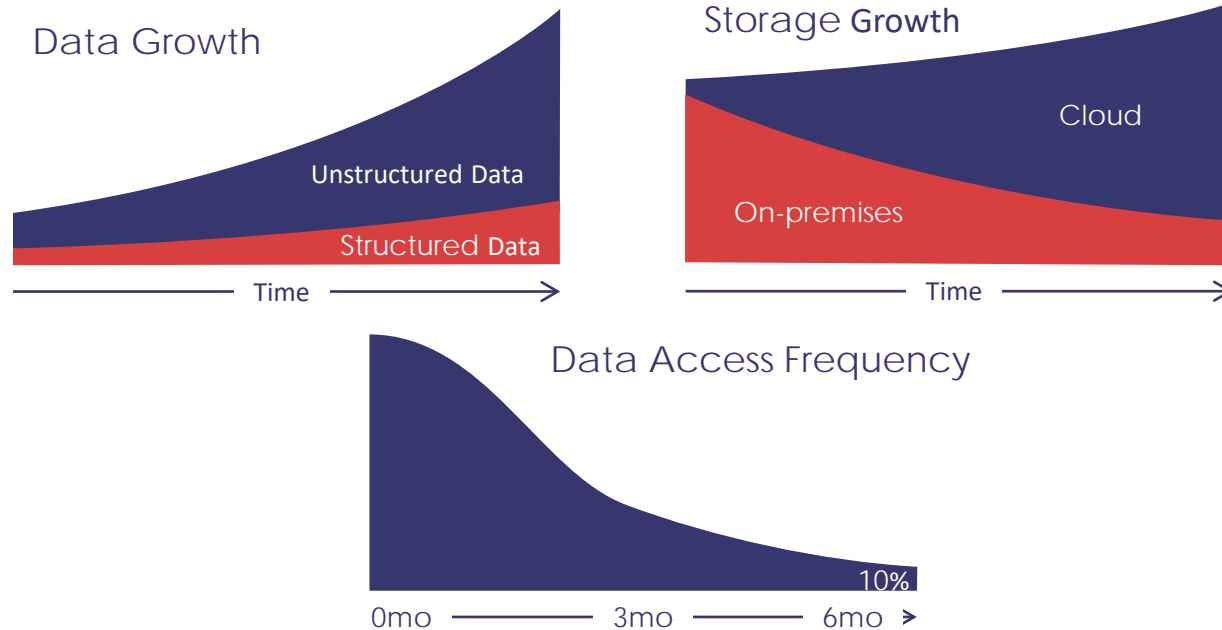


Hosted Storage Solution Overview

Architecture at a glance



Managing Unstructured Data



As unstructured data continues to grow, clients are looking for a solution to protect and manage their data and provide a platform to procure additional storage seamlessly while controlling costs.

American College of Radiology



Critical Issues

- Storage demands exploding (100>250 Tb projected over 3 yrs)
- HIPAA compliance challenges
- Inefficient replication & data backup – traditional storage failing

Hosted Storage Solution

- Scalable object-based storage cloud solution
- Data availability through data dispersal
- Easy data restoration from a snapshot

Impact

- Sustainable growth model in place
- 70% reduction in overall costs
- HIPAA Security requirements met
- Data is secure, protected & dispersed across 3 data centers

ACR can now manage data growth, back up and data retention with our HIPAA compliant solution

Summary

To ensure resiliency under stress, partner with a vendor who can:

- 1 Assess and determine the right DR solution for an organization to meet its risk tolerance in a variety of scenarios
- 2 Develop, exercise/test and validate the DR solution to ensure they work during a disruption or disaster;
- 3 Implement hosted storage solutions for data that offers off-site protection and recovery ensuring invulnerability to weather events and other disasters;
- 4 Review, validate and advise on ways to improve downtime and continue patient care and hospital operations.

THANK YOU

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Questions and Answers

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