Delphinus Medical Technologies, headquartered in Novi, Michigan with a second office in Silicon Valley, is the first company to design and manufacture a 3D whole breast ultrasound system that utilizes a dynamic new technique to image the breast with the use of sound and water. The company's data is critical to its mission. Delphinus uses HubStor to safeguard intellectual property assets, contain storage costs, and to help meet FDA compliance requirements for preservation.

BUSINESS TRANSFORMATION

Delphinus now archives and protects its mission critical data in the Microsoft Azure cloud, meeting FDA data retention requirements, with a 52% reduction in storage demand.

GEOGRAPHY

United States of America

INDUSTRY

Medical devices

BUSINESS DRIVERS

- Regulatory compliance
- Data security
- Storage management

A DELUGE OF CRITICAL INFORMATION TO PRESERVE

Delphinus was formed in 2010 as a spin-out of the Barbara Ann Karmanos Cancer Institute in Detroit, Michigan. Delphinus holds numerous patents and proprietary assets for its innovative and scientifically-advanced works and is poised to usher in a new era of breast imaging. The company's flagship innovation, SoftVue™, is an unparalleled 3-D whole breast ultrasound system unique to medical imaging that has received FDA clearance for diagnostic imaging purposes.

Specializing in medical imaging development requires Delphinus to generate and store large volumes of data, including both raw and processed data. The medical imaging files they must preserve, formatted to the Digital Imaging and Communications in Medicine (DICOM) standard, average three to four gigabytes in size. Supporting research and development, clinical trials, and proprietary assets assigns critical importance on the security, integrity, and availability of Delphinus' information. Additionally, Delphinus must adhere to a 10-year data retention mandate required by the FDA for technology approvals awarded by the agency.

USING THE CLOUD TO PROTECT DATA WHILE AVOIDING EXPENSIVE STORAGE INFRASTRUCTURE

The IT team at Delphinus had growing concerns about the aging hardware that was storing 50 TB of content. Knowing the company would generate much more storage demand in the future, they wished to avoid the classic trap of keeping archive data on expensive primary storage.

"With our unique requirements and the large amount of data we manage, local storage was not working and most cloud-based solutions were too expensive and cumbersome. HubStor provided us the advantages we needed: storage and access to large data sets across our office locations, scalable operations that meet our growing demands, and functional ease that is both convenient and secure."

Cia Hang
IT Manager, Delphinus

COMPANY:

Delphinus Medical Technologies, Inc.
http://www.delphinusmt.com/

HOST AZURE REGION:

North Central US

STORAGE METRICS:

- **50 TB** currently in HubStor
- **2-4 TB** average monthly growth
- **52%** storage reduction from deduplication and compression

The all-inclusive cloud model of HubStor, including the underlying Azure costs, was more affordable than the amortized cost to acquire and operate the storage capacity on-premises.

FAST DEPLOYMENT

Delphinus started using HubStor in a Proof-of-Concept (POC) test. Their HubStor tenant was running in less than a day. With HubStor's assistance, the Delphinus Azure AD account was configured. This was followed by the quick installation of the HubStor virtual cloud gateway. Within days, Delphinus was testing ingress and egress with their fully operational hybrid cloud storage environment without adding new infrastructure or disrupting users.

GETTING DATA TO THE CLOUD

Delphinus wanted policy-based data migration to the cloud with identity integration and full synchronization of folders and access controls. After reviewing other vendors, Delphinus found that HubStor uniquely met this need.

HubStor's virtual gateway software cloud-enables the storage in both the Michigan and California offices, with deduplication across both sites. Delphinus routinely ingests large data sets and uses the bandwidth throttling feature to control the network impact of ingress during peak and off-peak hours.

STORAGE SAVINGS FROM POLICY-BASED MIGRATION, DEDUPLICATION, AND COMPRESSION

When data is ready for archiving, Delphinus configures a policy to migrate it into their HubStor tenant. HubStor applies deduplication and compression to reduce the data volume. After data is successfully committed in the cloud, on the next pass HubStor automatically cleanses the original data from the source locations.

To date, Delphinus has realized 52% storage volume reduction in the data sent to HubStor. With three synchronous copies in the cloud, Delphinus has hassle-free data protection.

HubStor has enabled Delphinus to avoid adding more capital-intensive storage infrastructure to keep up with the company's storage needs. And there is now less data to backup on-premises.

Solution Overview

Isolated HubStor Tenant in Azure

Hub

StorSite: North Central US Region

Staging Blob Storage (LRS - Hot)

Search Cluster

Stor: LRS Cool Storage

Stor Database

Blob Storage

Hub Database

App Service

Delphinus' Azure AD

Novi, MI

Gateway

Connectors

1 2 ... n

Silicon Valley

Gateway

Connectors

1 2 ... n

SECURITY:

• AES-256 bit encryption-at-rest
• ACL synchronization
• Isolated tenant in Microsoft Azure
• Azure Active Directory with HubStor directory synchronization

KEY FEATURES:

• Virtual Cloud Gateway with policy-based data migration and folder synchronization
• Self-service user access with asynchronous bulk egress
• Data-aware storage analytics
• Deduplication and compression
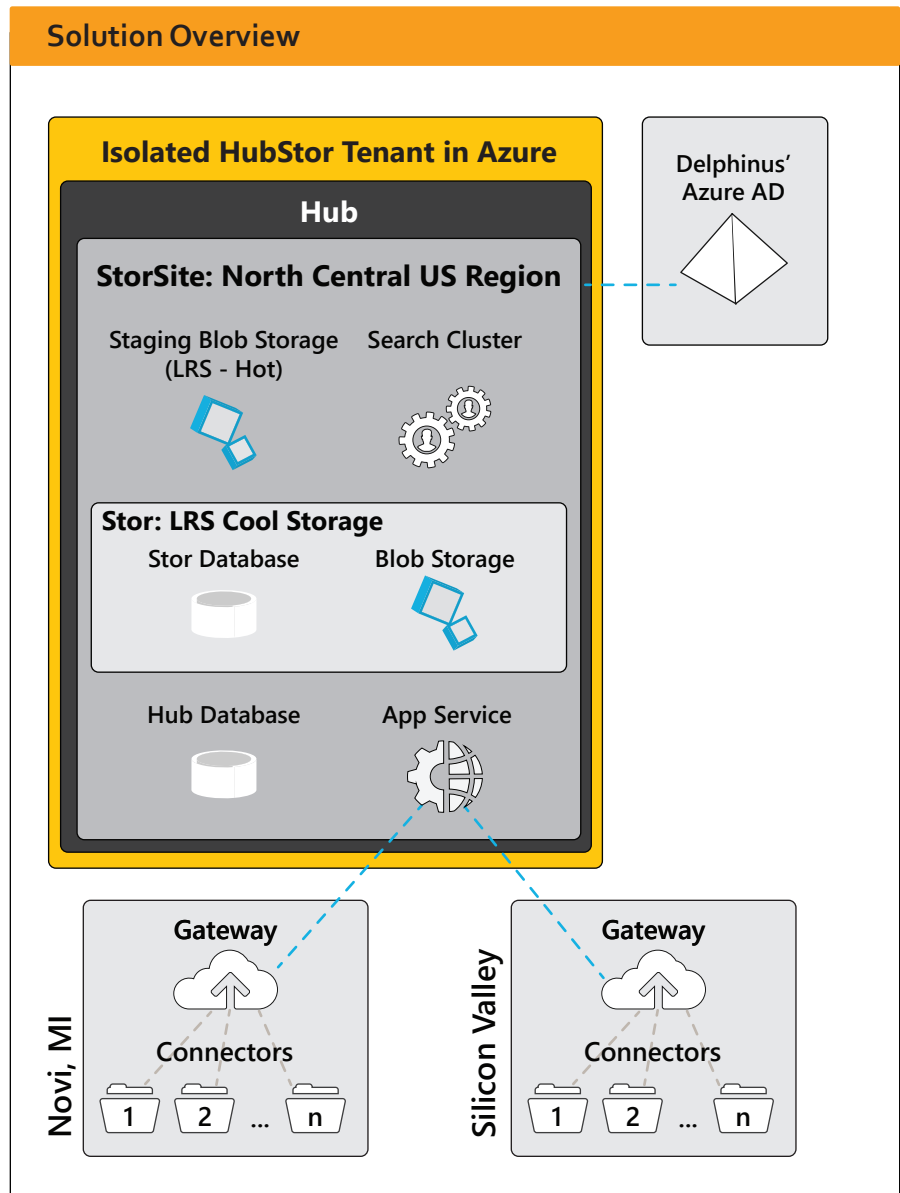
SELF-SERVICE USER ACCESS WITH BULK ASYNC EGRESS

Unlike most methods of using public cloud infrastructure to archive data, HubStor includes a Web-based user access portal which makes it easy for knowledge workers to browse, search, share, and retrieve their content from the cloud archive on a self-service basis. With HubStor's access control synchronization, Delphinus users can only see archives in HubStor according to their group memberships and the latest permissions captured from the source storage.

Users navigate content in its familiar folder structures; they can instantly open individual items or request entire folders to be recovered locally from the cloud.

To support bulk retrieval requests, the HubStor architecture includes the Export Service software which runs behind the Delphinus firewall and securely connects to their HubStor tenant. The Export Service satisifes bulk recovery jobs in the background. The IT team at Delphinus has pre-configured export locations where folder recovery jobs can restore archived content, thus mitigating data sprawl in the organization and enabling users in the two office locations to recover content to the appropriate facility.

When a user's requested folder is recovered, HubStor sends the user an email notification with the path. HubStor features in the Export Service give the IT team the ability to manage retention in the export locations based on inactivity automatically.

DATA-AWARE STORAGE PROVIDES VISIBILITY

HubStor's data-aware storage experience empowers the IT team with analytics that helps them to understand their storage footprint better. In HubStor, all data, access rights, and activities are automatically profiled for on-demand insight. Storage savings from deduplication and compression are graphically displayed; ingress and egress activity are charted visually as well. Using HubStor's chargeback feature, the IT team can now easily understand and report on storage demand related to different projects and retention requirements.

Delphinus' HubStor tenant also includes a search cluster which was later added to make the archive more discoverable.

"Having real-time visibility to our storage activity, through HubStor's analytics, has allowed us to anticipate potential issues and initiate proactive measures so productivity is not lost."

Cia Hang
IT Manager, Delphinus

HubStor™

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