# VTG VIRTUAL TECH GURUS

## HEALTH CARE AZURE MIGRATION
### A CASE STUDY

# CHALLENGE

Virtual Tech Gurus (VTG) helped two healthcare companies migrate separate workloads to a single on-premise data center and to Microsoft Azure in the cloud, following an acquisition.

The workloads had to be split to ensure protection of confidential medical data and compliance with healthcare regulations.

The VTG team used ZENfra™, VTG's proprietary tool, to manage and monitor the complex discovery and migration process significantly faster than traditional methods. ZENfra's™ high levels of automation also eliminated the risk of human error — an essential requirement in a highly regulated environment.

VTG's phased approach enabled a fast, seamless migration, despite tight deadlines and stringent security requirements. The project also required close collaboration between the two client IT teams and VTG to keep the different aspects of the migration in synch.

## Background

Prior to the acquisition, the two companies acquired and stored separate confidential medical and client operational data. The data is used to help healthcare organizations reduce costs and improve their performance and efficiency.

This type of data must be stored, secured, managed and communicated to ensure compliance with HIPAA (The Health Insurance Portability and Accountability Act of 1996) — legislation that provides data privacy and security provisions for safeguarding medical information.

Any data breaches or other forms of non-compliance can result in large fines, damaging legal action and loss of customer confidence.

To maintain compliance, change management during the migration was an extremely complex, time-consuming process.

Each change required a change ticket and servers generally required multiple changes per unit meant that no downtime was allowed during the migration.

## Environment

The original environments included SQL, custom applications, Active Directory, FTP services, custom firewall rules, Linux, AIX and NAS devices. Specifically, the environment included:

We had to complete the migration in a restricted timescale with no downtime or disruption to business processes.

- AIX servers with Oracle database
- 32 SQL clustered physical servers
- 1000 VMs
- 40TB of Isilon scale-out network-attached storage
- 400TB of block storage (VMAX and VNX)

## Challenges

Before migration could take place, the team had to identify and separate the workloads and dependencies that required compliant storage on-premise and those that could move to the cloud. This required highly accurate profiling.

As the acquisition represented only a partial takeover, the team had to isolate certain data to maintain commercial confidentiality.

The team had to maintain secure communications between existing and new locations to avoid IP address changes.

Successful migration of FTP servers was essential because of high levels of dependency — every server touches the FTP server.

The project had to be completed in a restricted timescale, with minimal downtime or disruption to normal business processes and service to clients.

# PROCESS

## Approach

VTG recommended a phased approach to the project, carrying out infrastructure and dependency discovery, and destination identification before completing migration to the new data center and to Azure.

The process included the following stages:

- Discovery
- Destination identification
- Precheck
- Change management
- Migration automation

## Discovery

We worked with both IT teams to identify servers, storage, network and back-up components. We then assessed the original infrastructures to define the servers and data to be migrated.

To compile the list of servers and storage devices, we discovered all the devices in the environment using log files and our proprietary tool ZENfra™. By automating the collection of data from log files, ZENfra™ eliminates the complexity of data capture and reduces the risk of human error.

We also used ZENfra™ to discover installed applications, map dependencies and discover firewall rules.

ZENfra's™ automated processes enable us to constantly update the discovery data to keep up with any ongoing changes during the project.

## Destination Identification

Using the application profiling discovered by ZENfra™, we worked with both IT teams to identify the destination profiles based on HIPPA compliance, security requirements and application dependency.

More than 80 percent of the workload had to move to the new on-premise data center to ensure compliance with HIPPA requirements.

We were able to migrate the discovery support system (DSS) environments to Azure. We recognized that the DSS applications required grouping of servers, but with separate SQL, application and access control for each company's environment.

## Precheck

ZENfra™ validates migration requirements and compliance with best practices using the data collected from the servers. If there were any issues, we corrected them before starting the migration to eliminate the risk of migration failures. With our automated process, we validated this periodically to keep up with any changes.

# PROCESS

## Change Management

To maintain compliance, the change management process requires complete details of every aspect of the migration. We had to create custom documents for each of the multiple changes required for every server migration.

ZENfra's™ automated process enabled us to significantly reduce the time needed for change management documentation and administration. It also reduced the risk of human error and helped maintain a fast approval process.

## Migration Automation

Based on our comprehensive planning and Precheck, we recommended best practice and remediated any outstanding issues as part of the migration. Once the changes were approved, we automated the migration process using ZENfra™ and executed the script on the servers based on the ZENfra™ results. This allowed us to migrate multiple servers in a consistent way.

The key stages in the migration included:

- Migrating compliant workloads from existing data centers to the new facility using ZERTO to ensure business continuity
- Migrating DSS workloads to Azure using ZERTO, database backup and restore
- Extending the VLAN between existing and new data centers to avoid IP address changes
- Extending Active Directory Domain Services(AD) between data centers
- Extending existing AD services to Azure ADservices
- Migrating the critical FTP server which had dependencies with every server

## Project Management and Reporting

With multiple client teams working on the project, we recognized that it was important to keep everyone up to date with the changes. We conducted joint meetings with both IT teams to identify gaps, discuss options and develop a high-level migration plan.

To manage the project, we used our ZENfra™ migration tool to automate resource allocation for the migration, track approval processes and report migration status to all teams.

# SOLUTION

## Outcomes

- Delivered a successful, seamless migration in a tight schedule with minimal downtime
- Allocated diverse workloads to the correct destination
- Maintained HIPPA compliance within the change management process
- Implemented consistent standards based on industry best practice
- Reduced discovery and migration time by standardization and automation
- Reduced change management administration time

## Working with VTG

VTG partners with your organization to enhance information technology departments, support roles, and provide integrated solutions. We work as part of your team, solving business needs and becoming a trusted partner.

We work closely with you to align business needs with technology. We identify solutions that offer a cost-effective approach by leveraging the technologies you currently have. Our team can move your applications and workloads to the cloud with ease. We help plan and oversee your company's migration and help your business by reducing downtime and eliminating hardware costs.