SphereGen

Migrating Mirth to Azure

SphereGen Case Study

Our client, founder of an EHR solution for Urology, needed to migrate their on-premise Mirth Connect channels and SQL servers to the Cloud to increase accessibility and scalability.

To facilitate the migration, SphereGen setup a mirrored infrastructure system on Azure and developed a batch program to migrate channels and their connections to the new Azure site.

Microsoft Partner

OVERVIEW

Our client was experiencing processing constraints imposed by using an on-premise version of Mirth with their EHR solution. While the Mirth configuration was satisfactory, the on-premise infrastructure was limiting. To resolve these constraints, SphereGen worked to migrate their Mirth channel connections and SQL servers to the Azure cloud.

Challenges

Due to an on-prem version of Mirth, our client was experiencing multiple management issues with their database system:

- Accessibility – Without a cloud infrastructure, access to the database system was limited to people on-prem, or a virtual remote connection had to be established.
- Load Balancing – the on-premise infrastructure was not elastic, resulting in slow performance times during high volume processing.
- Maintenance Cost – With physical servers in place, maintaining the servers and the space to house them was costly. There was also no ability to reduce process overhead during low volume processing times.
- Complexity of Migration – the Mirth system was integrated to 195 external channel connections, and all had to be migrated concurrently.

Solution

SphereGen used a three-step process to migrate the Mirth and SQL servers to Azure.

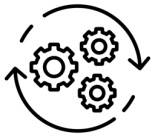
1. Setup Azure infrastructure to mirror the current Mirth configuration
2. Migrate SQL data and Mirth channels to a test environment and QA test
3. Deploy migrations to production and retest

Our client was able to accurately test out all migrations before going live. As a result of the Azure migration, the limitations of accessibility and load balancing were removed. Cost savings can be achieved by automatically spinning servers up and down based on volume processing and not having to maintain physical servers. Migrating to Azure also provides the ability to scale the system as needed for future growth.

RESULTS

Enhanced Accessibility /Scalability

Process Optimization



Cost Savings

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THE DETAILS

In order to ensure a successful migration of SQL and Mirth connections – the project was broken into 3 steps.

APPROACH

Setting up the Azure Infrastructure

Even though the on-premise version of Mirth was causing challenges, the Mirth configuration was still accurate. The first step in configuring Azure was to make sure that it mirrored the current Mirth configuration.

The Azure instance was built to include load balancing with virtual servers and an SQL Managed instance with High Availability to cover failover for server or database failures. The appropriate firewall protection was setup to provide secure access to all data.

Mirth Connector and SQL Migration to Test

After the Azure instance was properly configured, the SQL data was migrated to the cloud. One Mirth Connector was migrated to Azure for testing. When the cloud connection was successfully tested, a batch program was used to migrate the rest of the Mirth Connectors. The batch program successfully migrated 195 external system connections. All connections were tested.

Production Deployment

Once all connectors and data were tested and verified, essentially the production environment was ready to go live. After signoff, all DNS settings were changed to point to the cloud.

CONCLUSION

Migrating Mirth and SQL to the Azure guaranteed our client the following benefits:

- **Accessibility** – Through Azure, access to the system can be accomplished from any location
- **Load Balancing/Optimization –** servers automatically scale up and down according to data volume, optimizing process performance.
- **Reduced Cost –** the cost of maintaining physical servers is removed. With load balancing, servers are brought online according to need – reducing usage cost.
- **High Availability** - the cloud environment is built to guarantee a failsafe cutover to ensure system uptime is successful.
- **Scalability** – the flexibility of cloud easily supports future growth.

CONCLUSION continued

Migrating Mirth to the Azure cloud enabled our client to resolve the constraints imposed by an on-premise version. As a result, they are experiencing improved process optimization by automatically responding to volume fluctuations. Preparation for future growth and failsafe backup is provided by Azure's inherent scalability and high availability options. Overall cost reduction is achieved by removing physical server maintenance and housing. This migration was a successful in meeting all the goals of our client!

SphereGen is a unique solutions provider that specializes in cloud-based applications, custom web/mobile apps, RPA (Robotic Process Automation), and Extended Reality (AR/VR/MR). We offer full-stack custom application development to help customers employ innovative technology to solve business problems.