



CASE STUDY

USA NATIONWIDE INSURANCE AND FINANCIAL SERVICES PROVIDER

Insurance Provider Reduces Risk with Enterprise-Wide Data Integration

One of the key components of an insurance company's success is its ability to analyze risks, which leads to the development of policy rates that enable them to maintain a profit while keeping insurance affordable. Like many enterprises, this insurance company's data was generated, collected and processed separately on multiple platforms. This created data silos between mainframe and open systems, making the complex task of risk analysis even more challenging. In order to increase their competitive edge and provide better claim experiences, they required a solution that allowed them to integrate data from all computing platforms to better understand customer behavior and meet customer expectations.

Luminex recommended a secure, efficient data integration solution: Mainframe Data Integration (MDI) SecureTransfer for the Microsoft Azure Data Lake. The solution would eliminate security and speed concerns, and make mainframe data readily available to the Azure Data Lake for joint processing, providing more accurate and complete analytics to make better business decisions.

Pain Points, Partial Solutions & New Challenges

Previously, the actuary team was required to perform analytics on mainframe and open systems data separately. They relied heavily on a mainframe data processing tool, which limited their ability to ask new questions of the data. As analytic tools for open systems advanced, the ability to extract new information from the mainframe couldn't keep up with the demands of an industry dependent on accurate predictions and uncovering critical data.

In addition, the inability to correlate data from all sources, without it being processed first, created its own set of challenges. Their procedure required that they process mainframe data from 4 different VSAM applications plus Oracle data from open systems. Then, they manually combined data into spreadsheets that they had been maintaining for over 20 years.

The arrival of the Data Lake brought hopes of discovering hidden correlations and the ability to ask questions that were previously not possible, leading to answers that insurance premiums are dependent on. However, getting mainframe data to Azure brought additional obstacles as data transfer methods were limited. Their security team prohibited the use of FTP, whereas, secure options such as IND\$FILE and SFTP were found to be too slow or difficult to implement.

TCP/IP transfer options and challenges:



- IND\$FILE: Too slow, manual process
- FTP: Unsecure, prohibited by SecOps
- SFTP: Too difficult to implement on the mainframe
- Host MIPS required to convert, encrypt and move data



A Complete Solution: SecureTransfer for the Azure Data Lake

Luminex's Subject Matter Experts considered the provider's objectives and presented an innovative solution that moves mainframe data quickly and securely to the Azure Data Lake via SecureTransfer, a solution that utilizes tried-and-true FICON mainframe I/O technology.

The solution is designed to move mainframe data over the secure FICON I/O channel to the MDI appliance using a simple batch utility, IEBGENER. By emulating a tape drive, SecureTransfer reduces processing time often associated with the TCP/IP methodology employed by other file transfer methods. Additionally, avoiding the use of TCP/IP on the mainframe provides a more secure solution by using RACF controls and eliminating the need to open vulnerable ports for file transfer. The data passes through the MDI appliance, is translated from EBCDIC to ASCII and encrypted as it is sent to an edge node via SFTP or directly to the Data Lake using webHDFS. The process eliminates the need for digital certificates and other cumbersome, staff-intensive methods necessary to satisfy security requirements.

As the data is ingested by the Azure Data Lake, it is combined with other data sources and made available for joint analytics and additional processing using tools like U-SQL and Power BI. As a result, the actuaries are better able to accurately predict answers to questions such as "what is the client's life expectancy?" and understand more about their clients' behavior, which is essential for claims underwriting.

Challenges

- Critical data was isolated to the mainframe
- Need for more accurate claims predictions
- Segregated data didn't give actuaries the entire picture
- Limited mainframe data analytics tools
- Difficulty implementing secure transfer methods from the mainframe
- Time-consuming process to move large files

Solution

Luminex MDI SecureTransfer and Microsoft Azure Data Lake

Benefits

- Easy to use and deploy
- Provided secure method for moving mainframe data to Azure
- Increased speed and efficiency of file transfer
- Provided opportunity for joint/enterprise-wide data analytics
- Opened critical mainframe data to off-host data analytics tools
- Moved processing off-host, reducing CPU cycles and processing times

MAINFRAME

ICEGENER data over FICON channel



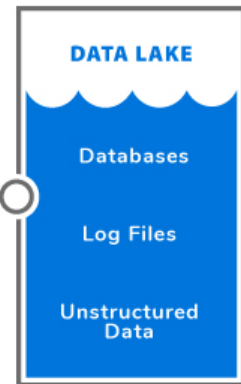
MDI BIG DATA TRANSFER

Convert from EBCDIC dataset to ASCII file
Encrypt and move data via webHDFS



DATA LAKE

Normalize file data
Merge with other data sources
Run analyses



Results and Benefits:

The MDI SecureTransfer and Azure Data Lake solution provided the opportunity for joint data analytics that was, until then, functionally unavailable to the company due to security, speed, and implementation issues. SecureTransfer provided a solution that met recently mandated security protocols by using native FICON channels and off-hosted SFTP. In addition, they found the solution to be faster than their previous FTP approach, even with the addition of end-to-end encryption.

With a shrinking mainframe IT team, ease of implementation was also a growing priority. The client found the Luminex solution extremely easy to use and only took about an hour for JCL set up and output reporting. Most importantly, SecureTransfer enabled access to critical mainframe data that had previously been limited to only a few mainframe reporting tools. With all of their information in one place, the company could now enhance and automate data analytics, resulting in a better claims experience, improving business operations and giving them a competitive edge to ensure future success.

SecureTransfer was much easier, certainly more secure and delivered on performance... it's a no-brainer

Systems Engineer, Insurance Provider