# HEALTH INSURANCE PROVIDER CASE STUDY



"Fantastic Product, support, services and team from Cirrus Data. The insertion was efficient and did not hamper performance, workflows, or SLAs in any way." -- Storage Specialist



### THE CHALLENGE

Always-on service. Flexibility in resource allocation. Superior cost-efficiency that deploys the exact level of computing power that meets the business need without paying a penny more than required. These benefits are all familiar to any business leader who has considered moving their onsite data center to the cloud. But while migrating to the cloud offers proven benefits, this migration is rarely simple. For a national health insurance organization, the sheer size and complexity of their data volumes potentially made a large-scale cloud migration costly, time-intensive, and disruptive to essential services.

Here is the challenge the health insurer faced. The insurer needed to remotely migrate its critical databases and applications across the county from a physical data center relying on mainframe-based zLinux LPARs to a modern IBM Cloud in nine months using a limited 1GB ethernet WAN connection. Making matters more complicated, the always-on nature of the insurer's business meant they needed to minimize downtime and maintain stringent SLAs on essential applications. The entire datacenter's workloads needed to transition at the same time on the same night to the IBM cloud, so testing and retesting to ensure a fast and efficient cutover was critical. Also, because of the complexity of the older zLinux LPAR versions, the insurer's IT department needed a team of data mobility experts to manage the migration from end to end.

### THE SOLUTION

The insurer found the experts they needed with Cirrus Data's professional services team, who were recommended by cloud specialists from IBM. Cirrus Data managed and executed the remote migration while providing onsite assistance and remote support, enabling the insurer's IT team to focus on strategic work. Using Cirrus Migrate On-Premise (CMO), the Cirrus Data team migrated all of the insurer's mainframe-based zLinux LPARs, which were running Oracle, DB2, and other critical healthcare and insurance applications, to the new IBM Cloud with minimal downtime and in one cutover for all storage, hosts, applications, and databases.

However, the remote migration was not without complications. Many of the older SLES zLinux versions would not initially reboot reliably after the insertion and migration began. Cirrus Data was able to quickly place a patch in the CMO migration appliance and solve for the reboot timeout issue during the migration phase. This meant any needed maintenance on the LPARs could take place in preparation for the final cutover or, if needed, be performed in regularly scheduled security patching. In addition, the 24/7 demand of the healthcare arena required the utmost in system reliability. This meant the insurer's IT team needed to rigorously test and retest the transition to the cloud to ensure final cutover was quick, efficient, and error-free.

### **QUICK FACTS**

**Customer Type** Insurance Provider

Customer Sector Insurance

Source Storage Dell / EMC VMAX

Target Storage IBM DS-8800

Number of Hosts/ Clusters 60 Hosts, Multiple Multi-Node Clusters

Host Types zLinux

#### Host Applications

Linux Oracle RAC, Linux DB2, other healthcarerelated databases and applications

Replication Type Remote

#### **Insertion Method**

Physical Insertion (for boot drive migration) Cirrus Migrate On-Premise was the ideal solution for this need. CMO yields to the host I/O during remote migration when the host's applications and databases are at their busiest, so when the insurer was migrating data to the remote IBM Cloud site, CMO ensured the migration occurred without customer impact. CMO also equipped the team with a wide variety of tuning parameters for remote migration performance; these ensured during the migration that no impact to the customer workloads and workflows occurred — a critical necessity in the healthcare arena. This allowed for rigorous testing and retesting with many iterations of data from the source site so the IBM and customer teams could make sure performance in the cloud was better than that on premise. Such testing and retesting were critical in optimizing the cloud from a performance perspective while practicing the cutover transition to the cloud multiple times, ensuring the final cutover day was fast, efficient, and without defect.



The LUN verification feature in the Cirrus Data Migration solution enables the customer to suspend the remote migration, test with actual customer servers as boot drives were migrated along with the data drives to the IBM Cloud, and then resume the remote migration while only resyncing the

changed data (rather than the entire dataset) from the source to the destination. This critical feature allowed for rigorous testing and retesting in the IBM cloud prior to the final cutover to the IBM Cloud. The Cirrus Data team worked with agility to help the customer provide multiple testing points to the cloud while maintaining the migration sessions and avoiding impact to the source live environment during testing phases.

The result? Complete management and execution of a complex cloud migration in nine months with only one night of transition of the entire datacenter's workloads and workflows to the cloud for each application and database in minutes when transitioning to the IBM Cloud. The insurer's environment, data, workflows, or SLAs in the source site were never impacted during the migration and testing phases to the IBM Cloud. The customer's IT team was especially pleased with the Cirrus Data team's ability to respond to the boot drive timing issue quickly and efficiently, ensuring a smooth migration to the IBM Cloud and enabling an easy final cutover upon completion of the final sync during the migration.

Now that the insurer's essential data lives in the cloud, the insurance company has superior service, resource flexibility, and cost efficiency to maximize customer satisfaction—all because they relied on Cirrus Data's experts to make a complex migration simple.

## CHALLENGES

- Migrate a mainframe running zLinux LPARs from an on-premise data center to the IBM Cloud within nine months over a limited 1GB ethernet connection all while minimizing downtime and fulfilling SLAs on critical applications.
- Manage and resolve issues from older SLES zLinux versions that initially would not reboot reliably during migration, finding a resolution while ensuring a smooth and efficient migration to the remote IBM Cloud site.
- Free up internal experts to prioritize more strategic projects by finding expert data migration professionals to manage, coordinate, and execute the entire cloud migration within nine months.

## SOLUTION

- The insurance company engaged the Cirrus Data professional services team to manage and execute the data center migration to the cloud, trusting their expertise and ability to minimize downtime for mission-critical applications.
- The Cirrus Data team used Cirrus Migrate On-Premise to migrate all the customer's mainframe-based zLinux LPARs, running databases and insurance applications to the new IBM Cloud environment with no changes to FC switch zoning or LUN masking on the source array and with minimal downtime cutting over to the IBM Cloud.
- To ensure a smooth cutover that met the customer's performance needs, CMO enabled multiple sync states for testing in the cloud with customer data, allowing the team to practice the transition to the cloud numerous times to ensure cutover to cloud, cloud storage hosts, networking, and storage were running optimally.
- To handle the SLES zLinux migration issues, the Cirrus Data team used an FC analyzer to find the root cause and updated the CMO code to ensure all versions could reboot reliably during the migration.
- When other hurdles appeared, such as not being able to employ space-efficient snapshots in the quantity needed for testing, Cirrus Data's migration solution suspended the migration from the source site while testing occurred on the data in the cloud. When testing was completed, CMO allowed for the catch up of the data without having to synchronize the entire dataset again by performing LUN verification to update the data that was altered during testing and overwrite this data with new production-changed data when the remote migration was continued.

## RESULTS

- The Cirrus Data team completed the remote data center migration within the nine-month timeline and provided multiple iterations of data for performance testing and cutover testing in the cloud prior to final cutover ensuring final cutover of the entire site on the same night was smooth and required minimal minutes per application and database to transition to the IBM Cloud.
- The insurance provider now leverages improved cost efficiency and performance from the IBM Cloud environment, enabling better customer service and reliability.



## ABOUT CIRRUS DATA

Cirrus Data Solutions Inc. (CDS) is a leading provider of block data mobility technology and services. The company distributes its solutions through systems integrators, managed service providers, channel resellers, and partners, including Dell Technologies, HPE, IBM, Microsoft, AWS, Oracle Cloud, Hitachi, NetApp, Pure Storage, Infinidat, AHEAD, CDW, ConvergeOne, Logicalis, SHI, Presidio, ePlus, Insight, Computacenter, Sirius Computer Solutions, World Wide Technology, and many others. Additionally, the company's flagship mobility-as-a-service offering, Cirrus Migrate Cloud, is available on the Microsoft Azure Marketplace, Amazon Web Services (AWS) Marketplace, Google Cloud Marketplace, and Oracle Cloud Marketplace. CDS is headquartered in Syosset, New York, and has support centers in Ireland, with sales and support offices across the United States, Europe, and Asia-Pacific. For more information, <u>visit Cirrus Data Solutions online</u>.

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