



# LEVERAGING MAINFRAME SECURITY AND PUBLIC CLOUD FLEXIBILITY

## The Client: GuideOne Insurance

A privately held corporation that engages in the collection and distribution of data for the airline industry.

## The Challenge

The client had been a longtime user of IBM® zSystems™ mainframes to manage the data for its airline and travel service customers. Its applications, including business-critical ones that return data inquiries for travelers and airlines or agencies, as well as less-critical ones for running its business, have been deployed across virtualized x86 servers in its data center, running the Linux® operating system.

The client wanted to move some of its application workload from those distributed systems to the public cloud to reduce administrative burden and cost associated with maintaining it in its data center. For some applications, this is a practical and cost-effective strategy. However, moving some existing mission- and business-critical applications to AWS® would have required their complete rearchitecting to ensure the absolute reliability and availability that the client and its customers require.

The client was looking for a strategy that would:

- Ensure the highest possible reliability for some of its existing business- and mission-critical applications.
- Move other workloads to the AWS public cloud.
- Provide a longer-term strategy for eventually moving all hardware out of their data center into a hosted, hybrid cloud environment combining the cost-effectiveness of public cloud with the reliability and security of private cloud.
- Continue to ensure compliance with PCI and ISO 27001 data and infrastructure security regulations.
- Consolidate workload that was currently spread across more than 1,300 partially utilized x86 cores.
- Leverage their existing investment in homegrown and third-party applications, without requiring a ground-up rearchitecting for AWS cloud.

## The Solution

CDW helped the client implement Red Hat® Enterprise Linux on 36 IFLs on an IBM z14® mainframe, providing a migration path to hosting their business-critical applications on the mainframe and freeing the client to migrate their remaining applications onto AWS cloud. The resulting IBM zSystems-based hybrid cloud solution would allow the client to achieve all the goals of reliability, security and maximum application performance for its businesscritical applications and data without rearchitecting all their code, while providing a costeffective public cloud strategy for non-critical applications and data.

The client successfully deployed and rigorously tested the operation of their hybrid cloud in a fully functional test/dev environment, with full deployment of their production environment in March, 2021.

## The Benefits

Consolidating x86 servers to Linux on IBM Z® brought major benefits for the client. Improved reliability and availability were crucial for mission-critical applications, ensuring system recoverability and data integrity. The client's hybrid cloud strategy evolved around the mainframe, enabling migration of less critical applications to AWS without major modifications. However, migrating business- and mission-critical applications to a public cloud would have required costly rearchitecting for reliability, availability, security, and compliance. Instead, consolidating workload onto 36 optimized IFLs on Z from 1,300 underutilized x86 cores resulted in significant benefits, including:

- **Improved performance:** Direct system-level connectivity between applications on IFLs and Db2 data on z/OS enhances I/O performance, reducing latency for data-intensive transactions and improving batch processing times.
- **Enhanced security:** Running business-critical applications and Db2 data on a single platform eliminates potential points of compromise. The secure z/VM hypervisor, native security features like RACF, and absence of vulnerabilities through network or host bus adapters make the platform inherently more secure.
- **Lower operating costs:** Consolidating workload onto IFLs enables the client to eliminate dozens of servers, reducing hardware, environmental, cabling, and management costs in their data center.
- **Streamlined administration:** Migrating applications to Linux on Z simplifies administration by having one platform, one hypervisor, and fewer hardware and networking components to manage.
- **Reduced software costs:** Consolidating from 1,300 cores to 36 optimized IFLs leads to significant savings on software license fees, particularly for applications priced per core.
- **Simplified compliance:** Standardizing on IBM zSystems hardware with direct application-data connection and mainframe security features simplifies compliance audits for PCI-DSS and ISO 27001, making them faster and easier.
- **Improved backup, recovery, and disaster recovery (DR):** Migrating workload to IBM zSystems offers better resiliency options through solutions like GDPS, enabling faster recovery times, potentially reducing downtime to minutes or seconds from hours.