Overview
For close to 50 years, Worldwide Flight Services (WFS) has built its reputation as one of the world’s leading providers of air cargo and ground handling services for airlines and airports. To maintain their reputation and meet growing demand, WFS must maintain high IT systems availability while meeting stringent government security protocols. Any downtime would result in an inability to screen and load cargo, which would lead to financial losses, reputation damage, and potential U.S. Customs fines.

After evaluating various disaster recovery options, WFS decided to partner with EagleDream Technologies to design an enterprise-grade, cloud-based disaster recovery strategy. Together, WFS and EagleDream decided to leverage CloudEndure Disaster Recovery into AWS. WFS can now meet aggressive Recovery Point Objectives (RPOs) and Recovery Time Objectives (RTOs) that were not achievable with any other solution.

Company
Worldwide Flight Services (WFS) is a leading global cargo shipping company, specializing in ground handling of air cargo for airlines, airports, and passengers. Operating in over 300 airlines and airports around the world, the company meets strict governmental security protocols to safely and securely handle over four million tons of air cargo each year.

EagleDream Technologies is an AWS Advanced Consulting Partner, helping customers with secure cloud application development. EagleDream relies on years of experience in data centers, virtual transformations, hybrid systems, and the cloud to help customize the right solution for customers’ businesses, including migrating their workloads, developing secure disaster recovery plans, and setting up well-architected platforms in AWS.

The Challenge
Since WFS operates in hundreds of airports worldwide, it must be compliant with all security protocols required by U.S. Customs and the TSA. All their applications have to meet the regulatory criteria outlined by these bodies, as well as new PCI compliance standards for secure handling of customer credit card transactions.

The WFS North American IT Infrastructure and Network Team, managed by Gwen Schulze, is responsible for supporting the entire infrastructure of over 130 sites and 50 warehouses across the U.S. and Canada -- maintaining all servers, Active Directory, network, and all individual devices (including desktop, laptop, and mobile devices).

About a year ago, Schulze recognized that their production environment was at risk without an adequate disaster recovery plan in place: “If our systems went down, we would not be able to function.” She further explained that an IT disaster would mean that “we could not screen cargo, therefore we could not load cargo on the plane, so the business would be at a standstill. We’d lose money, potential clients, and it would be a domino effect.”

When evaluating disaster recovery solutions for WFS’s North American on-premises data centers, Schulze sought a solution offering aggressive, near-zero data loss objectives for all busy servers, including SQL and IBM MQ servers. She also wanted to save the company time and resources when setting up a secondary site for recovery. After completing in-depth analysis, she found that CloudEndure Disaster Recovery offered the required features and benefits.

CloudEndure Disaster Recovery Solution
- Seamless integration with AWS
- Sub-second RPOs and RTOs of minutes
- Point-in-time recovery in the event of data corruption or ransomware
- OS-level, continuous block-level replication of all workloads and applications
- Automated failover and failback
- Support for additional future use cases, such as migration and forensics analysis
research and determining the implementation and operation costs of various disaster recovery options, she decided to team up with EagleDream to implement an AWS-integrated disaster recovery solution that would also be viable for deployment with other future IT projects.

The Solution
Scott Weber, EagleDream’s Director of Cloud Solutions, initially met with several disaster recovery vendors to start designing a solution for WFS. He explains, “we had direct technical meetings with other disaster recovery vendors, and told them up front the level of RPOs and RTOs we’d need. Luckily, they were all straight with us and said they just couldn’t meet those numbers, so there was no point going any further with anyone other than CloudEndure.”

Weber and Schulze then began planning implementation of CloudEndure Disaster Recovery technology. “When we started discussing CloudEndure, it sounded like a perfect solution since it was a block-level copy of everything, so therefore the OS would be there, data loss would be minimal, and we could replicate our domain controller,” explained Schulze.

Since no other vendor could come close to meeting their recovery objectives, the POC with CloudEndure Disaster Recovery was simply to start the solution implementation with a large web server. Schulze stated that “once the web server was replicated, we brought it up in AWS to see how it actually came up, and it looked great. It was really perfect.” They then began an iterative process of replicating the remaining servers, with “everything running smoothly.”

The Results
“As far as our testing has indicated, everything is working as expected,” Weber said. WFS and EagleDream’s main concern when starting the disaster recovery project was their IBM WebSphere MQ server, which Weber explained is “a very specialized piece of technology that not a lot of people are familiar with, and is a central component to everything that WFS’s system does.”

This is a message queuing server that performs critical communications with U.S. Customs and SITA. Improper communication with U.S. Customs can result in potential fines. Therefore, the fact that CloudEndure Disaster Recovery was able to properly replicate this server to AWS was critical to the success of the disaster recovery project.

The initial replication of all servers continued, with no performance impact on the source environment. Afterwards, WFS and EagleDream completed UAT end-to-end application testing as disaster preparation. Once the solution was implemented and tested, Schulze was able to emphatically state that “now that I’ve got a really excellent DR process in place, and I’ve also got an excellent partner in EagleDream, I can sleep very comfortably at night, knowing that if a disaster happens, at least we have a way to recover very quickly.”

Weber echoed her comments, and also shared that EagleDream has been referring other customers to CloudEndure Disaster Recovery after experiencing its “great features, including the admin console, blueprint setup for each server, and the ability to test as needed without interrupting the replication.”

Thanks to the success of this project, WFS is currently implementing an EagleDream-designed migration of their entire production environment to AWS, leveraging CloudEndure technology for aspects of this process as well.

Recommendation
For companies such as WFS that are evaluating CloudEndure Disaster Recovery, Schulze said, “I’m very impressed and I would absolutely recommend CloudEndure for disaster recovery purposes, not only for the RTO and RPO, but also for the ease with which you can very quickly be up and running in a cloud environment.”

About CloudEndure
CloudEndure, an AWS company, accelerates the journey to the AWS cloud with solutions that provide business continuity during the migration process and additional protection once there. Enterprises use CloudEndure to replicate their mission-critical databases, including Microsoft SQL Server, Oracle, and MySQL, as well as enterprise applications such as SAP. CloudEndure Migration simplifies, expedites, and automates large-scale migrations from physical, virtual, and cloud-based infrastructure to AWS. CloudEndure Disaster Recovery protects against downtime and data loss from any threat, including ransomware and server corruption. With CloudEndure it’s business as usual, always.