

# ATPCO meets partner airfare data demands faster



## Software

Red Hat® OpenShift®

## Partners

Sysdig

Amazon Web Services (AWS)

ATPCO, an airline-owned organization, is the world's primary source for airline retailing and pricing data. The company provides this data to a global network of airlines, data distributors, online travel agents, sales channels, and industry groups. To keep pace with dynamic, complex data needs, ATPCO's technology teams migrated from a traditional, virtual machine (VM)-based approach to the cloud. After migrating from Red Hat OpenShift 3 to Red Hat OpenShift 4, ATPCO has reduced delivery times for new features and services, built a stable foundation for developer innovation, and improved scalability across major cloud platforms in just a few steps.



## Aviation

More than **435** employees

## Benefits

- ▶ Reduced application deployment and service delivery times from months to minutes
- ▶ Created flexible foundation for developers to experiment and innovate
- ▶ Achieved greater responsiveness and stability at scale

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**Chris Blelloch**

Head of Technology Platform Services,  
ATPCO

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**Veerendra Akula**  
Platform Architect,  
ATPCO

## Delivering accurate, dynamic information to airline passengers and partners

ATPCO was founded in the 1960s by a group of airlines to collect and distribute airfare information to the travel industry. Its database now includes information on more than 289 million active fares for more than 400 airlines in 160 countries.

ATPCO faced increasing demand on its IT infrastructure, from constantly changing air travel pricing data to new fare elements to consider—for example, carbon impact, baggage allowances, seat pitch, and responses to the COVID-19 pandemic. Additionally, the company’s 2018 acquisition of rich content provider Routehappy demonstrated a need for improved scalability and application programming interface (API)-based integration with internal and third-party solutions.

The group initially tried delivering applications as microservices on virtual machines (VMs) and automating some processes to solve these growth-related challenges. However, establishing best practices for maintaining, monitoring, and securing services in this complex environment proved difficult, especially when demand for compute capacity and other resources changed frequently.

To continue to offer dynamic services and accurate information to its customers, the group sought to create a more agile, responsive cloud computing environment.

“We want to get out of the datacenter,” said Chris Blleloch, Head of Technology Platform Services, ATPCO. “By the end of 2022, we want all of our workloads to be running in public or private clouds, on a stable and sustainable platform.”

## Building a flexible cloud foundation with Red Hat’s enterprise Kubernetes platform

In 2018, ATPCO decided to adopt Red Hat OpenShift as the new foundation for its IT infrastructure, running in Amazon Web Services (AWS). Based on Kubernetes, Red Hat OpenShift is an enterprise container platform for applications in hybrid cloud or multicloud environments. It provides ATPCO with [operator-based](#) service orchestration, service discovery, and load balancing capabilities.

After its initial adoption of the platform, ATPCO migrated to Red Hat OpenShift 4 to expand its cloud environment to any of the leading public or private cloud platforms as desired, in just a few steps. The yearlong migration was done in four phases, each taking less than four hours.

“It was clear from the beginning that the Red Hat OpenShift roadmap would provide long-term support to meet our business and technology demands,” said Blleloch. “Even during our update to version 4, migration was painless and setting up clusters was automatic and easy. We are excited to be an early adopter of Red Hat OpenShift 4.”

The group engaged certified Red Hat partner Sysdig to enhance operational visibility and security for its Red Hat OpenShift deployment by improving collaboration between security, DevOps, and services team members.

## Creating innovative services and features faster for travel and technology customers

### Reduced provisioning and service deployment times from months to minutes

ATPCO's product teams have used Red Hat OpenShift to improve delivery times for new applications. Its previous VM-based provisioning approach required a month or more to create application environments—a process that now takes only minutes with automation. Additionally, production deployment can be now completed weekly in just 15 minutes using a [continuous integration and continuous delivery \(CI/CD\)](#) approach, compared to the former six-month timeline that required 2-3 hours for deployment.

"We can raise additional capacity easily within minutes. Instead of needing weeks to prepare hardware, run logs, and other tasks, it's a much simpler and more automated process," said Veerendra Akula, Platform Architect, ATPCO. "Compared to using VMs and on-premise systems, we can focus on rolling out new features faster to build solutions for customers, instead of configuration tasks that our OpenShift Operators now handle."

### Enhanced developer flexibility and freedom to innovate

Development teams' processes have also become more efficient with the shift from VM-based to [container](#)-based infrastructure. Developers can now build several experimental products to see what would work best for customers, without adding any resources, cost, or waste due to automated scalability. Operators and components, such as Red Hat OpenShift Serverless and Red Hat OpenShift Service Mesh, support automated scalability and a flexible, microservices-based approach.

ATPCO's developers can also use their choice of languages, frameworks, databases, and public cloud vendors to deliver innovation that aligns with customer demand. "For example, we're introducing a visual breakdown of the amenities built into airline pricing, such as whether or not a higher fee includes free bag check and extra leg room, versus a less expensive ticket that does not include those amenities," said Blelloch.

### Improved response to changing demand with greater stability at scale

Airline workloads are typically unpredictable, due to changing flight schedules, unexpected maintenance, weather conditions, and more. Previously, ATPCO had to prepare its infrastructure to support the maximum potential traffic in case of sudden increase in demand. However, monthly reports showed that central processing unit (CPU) resources were severely underused at less than 5%.

With the enhanced scalability included in Red Hat OpenShift 4, ATPCO's team can add or remove cloud capacity to its container environment to support demand in milliseconds. Now, CPU resources are used at close to 70% and cluster memory at 60%. In addition, its continuous deployment approach means ATPCO can use OpenShift operators to deliver updates, fixes, and new applications to production during business hours while drastically reducing downtime.

"Even at scale, we can more easily manage and maintain our platform and configurations with Red Hat OpenShift's ready-to-use features supporting our operational framework," said Akula. "We have not had any downtime since we started using the platform."

As a result, customers can access key travel data with fewer interruptions, leading to a better overall experience for them and their end users: travelers and airline passengers.

## About Sysdig

Sysdig is driving the secure DevOps movement, empowering organizations to confidently secure containers, Kubernetes and cloud. With Sysdig, teams secure the build, detect and respond to threats, continuously validate cloud posture and compliance, and monitor performance.

Sysdig is a SaaS platform, built on an open source stack that includes Falco and sysdig OSS, the open standards for runtime threat detection and response. Hundreds of companies rely on Sysdig for container and cloud security and visibility. Learn more at [sysdig.com](https://sysdig.com).

## Focusing on automation and management to support continuing growth

After success with Red Hat OpenShift 4, ATPCO is now focusing on increasing automation and finding technology solutions with more flexible pricing to remove any barriers to continued growth. The group is evaluating Red Hat Advanced Cluster Management for Kubernetes, an end-to-end solution for managing and securing Kubernetes containers across datacenters and public clouds. ATPCO is also testing Red Hat OpenShift Service on AWS, a jointly managed and supported solution that runs Red Hat OpenShift natively on Amazon Web Services (AWS) for easier subscription and pricing management.

“With Red Hat, we can meet our customers’ needs faster with new, high-quality services and features while still achieving our operational goals, such as reducing costs,” said Blelloch. “We also have insight into roadmaps and what future versions may include, and we can participate in the creation of new features that will help ATPCO continue to enhance our services.”

## About ATPCO

ATPCO is the foundation of flight shopping, providing pricing and retailing content tools and services to 430+ airlines, global distribution systems, sales channels, and technology companies. ATPCO links the entire airline community together, collaborating to develop industry standards for airline distribution and end-to-end technology solutions. From shopping to settlement, ATPCO solutions work seamlessly across existing, new, and evolving technologies and methods. Airline-owned and reliably supporting air travel for more than 55 years, ATPCO is everywhere people buy flights. For additional information, [visit atpco.net](https://atpco.net).

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## About Red Hat Innovators in the Open

Innovation is the core of open source. Red Hat customers use open source technologies to change not only their own organizations, but also entire industries and markets. Red Hat Innovators in the Open proudly showcases how our customers use enterprise open source solutions to solve their toughest business challenges. Want to share your story? [Learn more](#).

## About Red Hat

Red Hat is the world’s leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers develop cloud-native applications, integrate existing and new IT applications, and automate and manage complex environments. [A trusted adviser to the Fortune 500](#), Red Hat provides [award-winning](#) support, training, and consulting services that bring the benefits of open innovation to any industry. Red Hat is a connective hub in a global network of enterprises, partners, and communities, helping organizations grow, transform, and prepare for the digital future.

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