

CATHAY PACIFIC TRANSFORMS TO DIGITAL HYBRID CLOUD INFRASTRUCTURE WITH RED HAT



SOFTWARE AND SERVICES

- Red Hat® OpenShift® Container Platform
- Red Hat OpenStack® Platform
- Red Hat CloudForms®
- Red Hat Ansible® Tower
- Red Hat Satellite
- Red Hat Enterprise Linux®
- Red Hat Consulting
- Red Hat Learning Subscription

Cathay Pacific Airways Limited operates in one of the most competitive, customer-focused industries. To stay competitive, the airline sought to modernize its costly, time-consuming, and inflexible legacy IT architectures. Working with Red Hat Consulting, Cathay Pacific's IT team designed and implemented a modern hybrid cloud IT architecture platform and operating model, based on Red Hat OpenShift Container Platform and other Red Hat technologies. This new infrastructure incorporates on-demand private and public infrastructure for rapid, on-demand scalability and portability, as well as more efficient and cost-effective work processes. With these changes, Cathay Pacific can be more responsive to business demands and prepare its digital IT capabilities for the future.



TRANSPORTATION

33,000 EMPLOYEES

“With the Red Hat solution and support from Red Hat Consulting, we have a platform to deliver value to our customers much faster, with improved performance and stability.”

KERRY PEIRSE
GENERAL MANAGER, I.T. INFRASTRUCTURE AND OPERATIONS
CATHAY PACIFIC AIRWAYS LIMITED

BENEFITS

- Improved time to market by speeding server provisioning from weeks to less than one hour
- Increased stability with automation and integration, with capability for same-day production changes
- Reduced operational expenditure, including time savings and support costs



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LEGACY INFRASTRUCTURE DELAYS CUSTOMER-FACING IMPROVEMENTS

Cathay Pacific Airways Limited, a major international airline, operates in one of the most competitive and customer-focused industries in the world. Digital capabilities are critical to its business growth strategy. However, its legacy infrastructure hindered digital innovation, with inflexible infrastructure platforms that were time-consuming and costly to modify. As a result, delivering high performance for its internal systems, booking engine, and customer-facing website was increasingly difficult.

“Our legacy on-premise infrastructure was very slow to provision, so speed to market was affected,” said Kerry Peirse, general manager of IT infrastructure and operations at Cathay Pacific. “It wasn’t stable, with typically one or two high-severity incidents each month. It was difficult to scale up or down to meet demand, so we usually had to over-provision. With multiple platforms from different vendors, it was also not standardized, making it difficult to support and as a result, costs increased.”

Cathay Pacific had begun to update its previous infrastructure but found that improvements were still not happening fast enough. The airline sought a new partner—and platform—that could help it quickly modernize. “We’re keen to invest in what matters most to our travelers and give them a great experience,” said Kerry.

DIGITAL TRANSFORMATION BRINGS NEW SOLUTION FOR HYBRID CLOUD

Cathay Pacific decided to work with Red Hat to undertake a hybrid cloud-based digital transformation initiative to enhance or replace its existing private cloud components, ensuring support for existing services and assets while expanding its IT capabilities.

“We chose Red Hat because of its proven experience, innovative capabilities, and comprehensive cloud suite,” said Kerry. “By choosing an open source solution, we could prevent vendor lock-in, decrease reliance on managed service providers, and have more control of costs.”

Cathay Pacific’s team worked with Red Hat Consulting during a four-day discovery workshop to identify requirements and business needs, then confirm the company’s vision with a high-level design. “The workshop was valuable for the Red Hat team to find out how our environment worked and for us to work out how to simplify it,” said Kerry.

With Red Hat’s guidance, Cathay Pacific began its migration from its legacy infrastructure to a hybrid cloud—deployed at two datacenters—that consolidated its previous cloud and on-premise systems. The airline established the foundation of its on-premise private cloud environment with Red Hat OpenStack Platform and enterprise hypervisor software.

It provisions cloud workloads and compute resources using Red Hat CloudForms. Together with CloudForms, Red Hat Ansible Tower automates infrastructure service provisioning, configuration, and other management capabilities. Red Hat Satellite standardizes provisioning and maintenance for Red Hat Enterprise Linux, the core operating system for Red Hat OpenStack Platform. The airline also uses Red Hat OpenShift Container Platform, hosted in the public cloud using Amazon Web Services (AWS), to support more than 50 consumer-facing applications, including applications hosted on asiamiles.com and cathaypacific.com.

In addition to working with Red Hat Consulting, the airline purchased Red Hat Learning Subscription to gain all-access training for its technical staff on core skills, such as using Ansible Playbooks and provisioning with CloudForms.

“Red Hat OpenShift Container Platform lets us move applications seamlessly and easily across multiple providers with no downtime. We can also use public cloud to scale up or down as demand requires.”

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AND OPERATIONS,
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BACK-END IMPROVEMENTS ENHANCE CUSTOMER-FACING SERVICES FASTER TIME TO MARKET FOR CUSTOMER APPLICATIONS

Previously, Cathay Pacific's infrastructure and development teams often worked in isolation. Developers waited weeks to receive environments as delivery required ordering, setting up, and testing hardware with third-party involvement. With Red Hat Satellite, the airline delivers environments faster and supports cross-team collaboration. For example, application deployment volume has increased from 20 to 200 changes a day for both production and nonproduction environments.



"With an automated, repeatable process for building and configuring application servers, we've reduced provisioning times from weeks to under one hour. It takes the infrastructure team five seconds to initiate the process, then CloudForms provisions the workload in the background," said Kerry. "Our developers are now completing multiple deployments in a single day."

These changes are supported by more effective collaboration between Cathay Pacific's infrastructure and development teams through a cross-functional, OpenShift-focused cloud platform team.

Airline staff can now work on more valuable tasks, such as supporting ad hoc marketing promotions with much less advance notice. As a result, marketers can shift their focus from acquiring technology resources to running campaigns that will generate revenue, customer acquisitions, and bookings.

IMPROVED STABILITY WITH AUTOMATION AND INTEGRATION

Standardizing virtual machine (VM) provisioning and other tasks on Red Hat software helps Cathay Pacific's IT teams ensure application updates are made quickly, with minimal risk of errors or outages. Red Hat Satellite ensures that the airline's Linux, OpenShift, and other Red Hat deployments are up-to-date and compliant with industry security standards and local privacy laws.

"Before, we had one or two high severity incidents each month because of infrastructure or application instability. Now, due to Red Hat OpenShift high availability and auto-scalability features and Red Hat's responsive support, we've seen zero incidents over the past few months," said Calvin Lai, application manager at Cathay Pacific.



CUSTOMER CASE STUDY: Cathay Pacific transforms to digital hybrid cloud infrastructure with Red Hat

ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

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Integration between Red Hat's software—as well as internal and third-party solutions—supports seamless setup and mobility between tools and platforms. “Our CloudForms environment has an end-to-end workflow through integration with our service management tool and an automated IP delivery tool,” said Kerry. “Red Hat OpenShift Container Platform lets us move applications seamlessly and easily across multiple providers with no downtime. We can also use public cloud to scale up or down as demand requires.”

By automating and standardizing environments and change requests with Red Hat Ansible Tower, Cathay Pacific has also reduced change requests time from two weeks to 15 minutes—while increasing accuracy. “With Ansible Tower, we can deploy tools without any issues, which saves time spent on troubleshooting,” said Derek Lam, infrastructure lead at Cathay Pacific.

REDUCED OPERATIONAL EXPENDITURE

The efficiency of its new cloud environment has also helped Cathay Pacific reduce its infrastructure hardware, maintenance, and operations costs, lowering the total cost of ownership (TCO) for production environments.

“Standardized provisioning has been key in reducing costs, in terms of time saved due to fewer errors, as well as lower third-party support costs,” said Kerry.

CloudForms simplifies management by providing a single, unified interface into the airline's Red Hat environments. “Easy visibility means our employees spend less time on provisioning, thus reducing our operational costs,” said Simon Poon, enterprise architect at Cathay Pacific.

INITIAL PLATFORM SUCCESS SUPPORTS FURTHER MIGRATION

Cathay Pacific has already achieved its original goals of improving time to market, development efficiency, and costs. Next, the airline plans to migrate its remaining customer-facing applications to the new platform.

“It's good for Cathay Pacific's IT to be ahead. It makes it easier for us to attract and retain talent, which is difficult in Hong Kong,” said Kerry. “We have a platform to deliver value to our customers much faster, with improved performance and stability. Our teams have time to really innovate and provide more value to our customers—which is the ultimate goal.”

ABOUT CATHAY PACIFIC AIRWAYS

Cathay Pacific Airways, the home carrier for Hong Kong, operates to over 200 destinations in 52 countries and territories. Headquartered at Hong Kong International Airport, the company is a member of the Swire group and is a public company listed on the Hong Kong Stock Exchange. The airline was founded in Hong Kong in 1946.

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