

AMSTERDAM AIRPORT SCHIPHOL BUILDS AGILE CLOUD WITH RED HAT



SOFTWARE AND SERVICES

Red Hat® OpenShift
Container Platform

Red Hat OpenShift Dedicated

Red Hat JBoss® Enterprise
Application Platform

Red Hat JBoss Fuse

Red Hat 3scale API
Management Platform

Red Hat Satellite

Red Hat Gluster Storage

Red Hat Consulting

To improve its passenger experience and become the best digital airport, Amsterdam Airport Schiphol decided to migrate several of its IT systems to the cloud to become more flexible, secure, and efficient. The airport chose to deploy Red Hat OpenShift as the foundation for its hybrid cloud environment, supported by Red Hat Gluster Storage, Red Hat JBoss Middleware, and other Red Hat products to accelerate development and deployment and improve application programming interface (API) management. With help from Red Hat Consulting, the airport deployed OpenShift Dedicated in just 10 days. The new environment supports the airport's vision of agile, self-service processes and vendor flexibility that help its IT teams quickly and efficiently develop and deploy new customer-facing services.



TRANSPORTATION

2,093 EMPLOYEES
SERVING **63.6** MILLION
PASSENGERS PER YEAR

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GARBIS VAN OKBURCHT
I.T. MANAGER, AIRPORT OPERATION SERVICES,
AMSTERDAM AIRPORT SCHIPHOL

BENEFITS

- Achieved quick development and deployment, including launching a new cloud platform to production in only 10 days and cutting development time for new services and APIs by 50%
- Gained support for more agile processes and workflows through self-service capabilities
- Avoided vendor lock-in to a particular cloud provider, maintaining flexibility for future changes



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“Red Hat OpenShift Container Platform has truly stolen my heart. It is innovative and lets us deploy quickly and easily control our containers.”

MECHIEL AALBERS
SENIOR TECHNICAL
APPLICATION COORDINATOR,
AMSTERDAM AIRPORT SCHIPHOL

SUPPORTING CRITICAL I.T. SERVICES

Amsterdam Airport Schiphol, Europe’s fourth-busiest airport, has set a goal to become the leading digital airport by 2019. This goal includes providing seamless journeys for passengers—for example, by minimizing the time spent on the travel booking process—improving the cost-efficiency of its operations, and using the latest technology to collaborate with airlines and other stakeholders.

“Services such as our Flight API have a lot of connections to the outside world. It provides information for gate, terminal, and check-in time to passengers that is also shared with our partners,” said Mechiel Aalbers, senior technical application coordinator at Amsterdam Airport Schiphol.

To support its goal of being the leading digital airport, Schiphol needed a new approach to IT. The airport reviewed its main IT services and decided to migrate some services from its Central Information System Schiphol (CISS) solution to a modern infrastructure. This new infrastructure needed to provide massive scalability to support one of the key tenets of the airport’s goal: sharing relevant data via RESTful APIs based on open data principles.

“We foresaw a risk in having our open Flight API running on our critical infrastructure,” said Aalbers. “We were unable to get enough scalability from our existing on-premise infrastructure, so we wanted to see how an enterprise cloud could help.”

DEPLOYING INNOVATIVE PLATFORM SOLUTIONS FROM A TRUSTED VENDOR

To find a reliable open source cloud platform, Schiphol turned to a trusted vendor: Red Hat. The airport had already been using Red Hat JBoss Fuse to integrate its on-premise infrastructure with its Airport Service Bus platform, as well as Red Hat 3scale API Management Platform to manage its application programming interfaces (APIs). In addition, the airport chose to deploy Red Hat OpenShift Container Platform due to its compatibility and integration with Docker and Google Kubernetes.

“We looked at Docker and Kubernetes for the new platform, and we saw that Red Hat OpenShift Container Platform provided the best mix of these,” said Aalbers.

In addition, OpenShift Container Platform offers access to Red Hat’s industry-leading services. “At Schiphol, we first and foremost look for open source software, backed by support. These requirements put Red Hat front and center in our search process,” said Aalbers. “We could have selected the open source community version, but we would like to have support, so we chose Red Hat’s version.”

The airport also deployed several other Red Hat products, including:

- **Red Hat Gluster Storage**, an offering integrated with OpenShift Container Platform that simplifies persistent storage.
- **Red Hat Satellite**, a system management tool that provides easier management and updating of Red Hat technology.
- **Red Hat JBoss Enterprise Application Platform, Red Hat JBoss Fuse, and Red Hat 3scale API Management Platform** to support flexible API development and management and integrate on-premise and cloud environments.

Schiphol also chose the community version of Ansible playbooks for Infrastructure as Code (IaC) provisioning, the process of managing physical infrastructure resources through files rather than hardware configurations or tools.

To quickly deploy OpenShift to meet an internal deadline, the airport chose to run Red Hat OpenShift Dedicated, a single-tenant, Amazon Web Services (AWS) public cloud environment provided as a managed service by Red Hat. Schiphol also deployed OpenShift Container Platform in parallel in an Azure cloud. The OpenShift Dedicated cluster will eventually be handed over to Schiphol and changed to OpenShift Container Platform to support the airport's multicloud strategy.

During implementation, Schiphol engaged Red Hat Consulting to assist with building and deploying its OpenShift environment, particularly OpenShift Dedicated. The airport has now launched OpenShift Dedicated in production and is close to completing implementation of OpenShift Container Platform.

"Using Red Hat OpenShift Dedicated helped us speed the project. It was set up and ready to use in only 10 working days," said Aalbers. "Red Hat helped us migrate our services into OpenShift Dedicated and maintains the day-to-day operations of OpenShift Container Platform. I'm very, very happy with the consultant that we had. He really made a significant difference."

SPEEDING AND SIMPLIFYING INNOVATIVE SERVICES

RAPID DEVELOPMENT AND DEPLOYMENT

With the new platform, Schiphol can more quickly add new services. Connecting its on-premise environment to OpenShift Container Platform using JBoss Fuse lets the airport easily exchange data between its main systems and cloud APIs, such as the Flight API. In addition, by using its Airport Service Bus platform to infuse data into its JBoss Fuse-based API services in OpenShift Container Platform, the airport's IT teams can develop new APIs 50% faster.

"The operational Flight API took two weeks for three developers to create," said Aalbers.

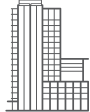
"Without the combination of JBoss Fuse and OpenShift Container Platform, its creation would have taken twice as long. We want to build stable, sustainable solutions, but we need things to happen quickly. Our developers don't have to wait for development or test environments now, so we can add greater business value quickly."

In addition, Red Hat 3scale API Management Platform simplifies and streamlines API management for faster deployment. "With 3scale API Management Platform, the learning curve is small, and you can deploy APIs very quickly," said Aalbers.

SUPPORT FOR CULTURE SHIFT

With the new OpenShift environment, the airport's IT team is seeing a shift in processes and approaches towards greater agility—while still providing a stable infrastructure. Self-service capabilities help Schiphol's teams work more efficiently.

"The API platform and OpenShift Container Platform are perfect examples of tools that help IT quickly deliver business value," said Aalbers. "They give us the opportunity to create a self-service platform for our colleagues and other business partners to deploy their own APIs, provision their own functional documentation, and start their own development stacks in OpenShift."



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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As a result, Schiphol can more quickly work together to develop and deploy solutions to improve the customer experience for its passengers.

"It's not only about technology. To achieve your ambitions, you also have to look at changing your workforce and the way people are working," said Garbis van Okburcht, IT manager of airport operation services at Amsterdam Airport Schiphol. "We are shifting to working in agile, dedicated teams with a lot of autonomy. From an infrastructure perspective, we would like to stay in control, but we want to let other teams make their own choices within that framework. Red Hat OpenShift helps us do so."

VENDOR FLEXIBILITY

Red Hat OpenShift Container Platform is a vendor-agnostic cloud offering. As a result, Schiphol can deploy solutions from other providers in its cloud environment whenever it needs—and even move away from Red Hat to another vendor.

"Red Hat OpenShift Container Platform supports our architects' vision of hybrid cloud, with no cloud provider lock-in," said Aalbers.

SUPPORTING THE JOURNEY TO BECOMING THE LEADING DIGITAL AIRPORT

After its success with other Red Hat products, Schiphol plans to add Red Hat CloudForms to support its self-service model by providing unified visibility and control over its virtual infrastructures through a single management interface. In addition, the airport plans to migrate its main public website to OpenShift Container Platform.

"We are confident that we can run our critical systems on OpenShift Container Platform," said Aalbers. "Once we've completed the move to OpenShift Container Platform in our on-premise infrastructure, we will look at moving more components and interfaces to this environment."

By using OpenShift Container Platform, Schiphol has support for creating a hybrid, multicloud platform that spans its Microsoft Azure, Amazon Elastic Compute Cloud (EC2), and local VMware environments—and can scale beyond its on-premise environment to take advantage of cloud resources when extra capacity is needed.

With this innovative technology foundation, Schiphol has robust support for its goal of becoming the leading digital airport.

"Red Hat OpenShift Container Platform has truly stolen my heart. It is innovative and lets us deploy quickly and easily control our containers," said Aalbers. "We're very happy about OpenShift Container Platform."

ABOUT AMSTERDAM AIRPORT SCHIPHOL

Owned and operated by Schiphol Group, Amsterdam Airport Schiphol is Europe's fourth-largest airport in terms of passenger number, number four in air transport movements, and ranks third in terms of cargo volume. Schiphol is the oldest international airport in the world to be located at the original site of its first aircraft landing.