

Austro Control Ensures the Secure Delivery of Aeronautical Data with CA API Management

austro
CONTROL

CLIENT PROFILE

Industry: Aviation

Company: Austro Control

Employees: Approximately 1,000

BUSINESS

Austro Control is the Austrian air traffic control and aviation authority. Approximately 1,000 employees ensure round-the-clock-safe air travel for thousands of passengers 365 days a year.

CHALLENGE

In order to implement the INSPIRE Directive of the European Commission, Austro Control needs to be able to provide geographic data via a web application programming interface (API). Its existing solutions did not meet the security, extensibility and flexibility requirements to fulfill this goal.

SOLUTION

With CA API Management, Austro Control was able to implement a solution in a matter of weeks to support the secure and fast provisioning of the requested data via a Web API.

BENEFIT

By leveraging the security features that come with CA API Management, Austro Control eliminated the need to establish access control across a range of systems, which reduced complexity and cost.

Business

Safety in the air

Every day, Austria's airspace contains up to 4,000 controlled aircraft, which equates to an annual volume of more than one million flights. Around 1,000 employees at Austro Control provide round-the-clock safe and secure air traffic 365 days a year.

The private sector company is owned by the Republic of Austria and originated in 1994 from the Federal Office of Civil Aviation. Since December 2006, Austro Control has been certified according to the rules of Single European Sky, which means it is entitled to provide air navigation services throughout the European Union.

The responsibilities of Austro Control are divided into two major business areas: the first – Air Navigation Services (ANS), which are comprised of mainly operational tasks; and the second – an aviation agency that oversees all official schedules, processes and policies.

One of the ANS responsibilities is Air Traffic Management, which includes managing operational traffic control as well as planning procedures and capacities. Around 300 air traffic controllers, using state-of-the-art technology, ensure safe air traffic and travel across Austria and its national transport airports. The Aviation Information Service provides pilots with all the data necessary for a safe flight. The flight service monitors weather conditions around the clock and, if necessary, passes on appropriate messages to the pilots.

On behalf of the Republic of Austria, Austro Control Aviation Agency provides administrative services for aviation. These include, for example, the inspection of an aircraft, as well as the supervision of the maintenance and aeronautics companies.

Challenge

Meeting EU regulatory requirements for data quality

“During day-to-day business, Austro Control has to comply with, and implement, national, European and international regulations,” says Klaus Gäbler, expert for Geoinformation for Austro Control's Aeronautical Information Management team. One of these regulations is the Aeronautical Data Quality (ADQ) regulation of the EU, which requires that aeronautical data of a certain quality must be delivered digitally to partners, such as air traffic controllers and pilots.

In addition, Austro Control must also implement the EU Directive INSPIRE, which regulates the establishment of infrastructure for geographic information in the European Community. Every EU Member State is obliged to provide data for this. As the publisher of the Aeronautical Data for Austria, Austro Control is obliged to supply the relevant information in this network. In addition, the company has to implement the requirements of the International Civil Aviation Organization (ICAO), which establishes the rules for worldwide civil aviation.

Due to the numerous legal requirements and regulations, huge amounts of data are generated every day, which Austro Control must evaluate, process, share and store. The cost of evaluation and storage are high as is maintaining data integrity and availability.

To enable the digitalisation of geographic data and meet the various requirements flexibly, Austro Control decided to replace its existing isolated applications with a uniform data infrastructure. A central web-oriented platform for the better visualisation of static data needed to be created to inform users promptly about updates and providing tailor-made data packages. The decision to proceed with this transformation took place in 2016.

Solution

More security and less complexity
for querying processes

“We were looking for a solution that would provide us with maximum functionality so we could easily provision data via an API, and also meet future requirements,” explains Alfred Lettner, System Manager for Static Data in Aeronautical Information Management at Austro Control. “In January 2016, we embarked on a proof-of-concept with the support of CA Technologies, which has been carried out to our complete satisfaction.”

In March 2016, 3Kraft, partner of CA Technologies and a long-time supplier to Austro Control, began work on the implementation of the project. Austro Control has already implemented various other IT projects in partnership with the Viennese software company 3Kraft, and has profited from the expertise of its software developers. “The Internet offers a wide range of possibilities, but also stumbling blocks, which is why we wanted a simple and secure solution to optimise our data distribution solution,” says Alfred Lettner. “With CA API Gateway, 3Kraft has provided us with an optimal solution that meets our requirements and is also easy to use.”

Austro Control operates a wealth of servers and applications across its various business areas, some of which are run by outsourcers. The Aeronautical Information Management team uses around 200 servers for data management, of which more than 80 percent are virtualised. This environment is subject to permanent change, which is why a flexible solution that could be quickly adapted to the environment without great administrative effort was needed.

After deciding on the API management solution from CA Technologies, the implementation began at the end of 2016. The configuration and deployment of the solution was carried out in close collaboration between the IT specialists of Austro Control and the 3Kraft team. In addition to configuration, pre-implementation tasks also included the setting up of a test environment in the production environment, which ran to the full satisfaction of Austro Control.

“The fact that we have handed over the maintenance and administration of CA API Gateway to 3Kraft has many advantages for us,” explains Klaus Gäbler. “Patches are applied promptly and ensure high safety standards, which in an environment of trading sensitive data such as ours, is extremely important.”

CA API Gateway has optimised the handling of geographic data requests and the associated user management. The appliance now makes it easy to store access rights for users in a database, allowing them to access the information they want through various channels, such as a browser.

With CA API Gateway,
Austro Control was
able to implement
a solution within a
matter of weeks for
the secure and fast
provisioning of data
via a Web API

“CA API Gateway provides an abundance of interfaces that make it relatively easy to integrate with existing systems,” reports Florian Bruckner, Managing Director of 3Kraft. “For example, within a few hours we were able to integrate map data into an existing web solution and make it available to authorised users via browsers.”

According to Florian Bruckner, this rapid integration, and the fact that CA Technologies offers CA API Gateway as an on-premise version, means APIs can quickly become part of production operations.

Bruckner goes on to praise the user interface of the solution. “It aids the configuration and creation of services, which makes it easier for us to deliver results quickly and practically,” he says. “The simple management and rapid incorporation into the system significantly reduces the realisation phase and also simplifies maintenance.”

Benefit

CA API Gateway strengthens security and optimises processes

With the introduction of CA API Gateway, Austro Control has succeeded in significantly improving security when using commercial off-the-shelf and open source web software. Separating back-end solutions on the intranet from the public Internet prevents unauthorised users from accessing and potentially exploiting sensitive data.

“CA API Gateway is a ready-to-use appliance, which has significantly reduced our internal administration workload,” says Alfred Lettner. “Since 3Kraft took over configuration and maintenance for us, we rarely have any problems.” The actual configuration took place in a very short time so that the API gateway could be provisioned promptly.

By using CA API Gateway, Austro Control benefits from the following:

- High security standards
- Simplified user management
- Reduced IT administration, as only one appliance needs to be managed
- Continuous maintenance by CA Technologies Partner 3Kraft
- Greater flexibility, which means it can react quickly to new requirements
- Compliance with national, European and international regulations for aviation.

“The authorisations that CA API Gateway offers us, simplifies the maintenance of our services and saves on time-consuming administration, which means we can concentrate on our core tasks,” explains Klaus Gäbler. He also sees the configurable logging mechanisms of the solution as an advantage, as this allows simpler analysis based on different criteria.

With CA API Gateway, Austro Control has gained a future-oriented solution that not only solves a short-term need but also has the capabilities to support other long-term projects.



Founded early in 2002 as a system house, today 3KRAFT is one of the most recognised software companies in Austria. 3Kraft is based on lean structures and delivers cost-effective tailor-made software solutions for its demanding customers. Its top priority is for all the projects to be feasible, both technically as well as commercially. The focus is always on the benefits and added value for the customer. The company has a broad expertise in different environments. The Viennese software team designs its solutions under the motto: Keep it easy and simple.



Connect with CA Technologies at ca.com



CA Technologies (NASDAQ: CA) creates software that fuels transformation for companies and enables them to seize the opportunities of the application economy. Software is at the heart of every business, in every industry. From planning to development to management and security, CA is working with companies worldwide to change the way we live, transact and communicate—across mobile, private and public cloud, distributed and mainframe environments. Learn more at ca.com.