Essent

Essent deploys Axway API Gateway to govern the flow of data on the edge, securing web APIs and mobile applications

Headquarters

Den Bosch, the Netherlands

Industry

Energy & Utilities

Challenge

Provide an easy-to-use, secure, robust and proven solution to enable web services and mobile applications for Essent's customers, partners, employees and the general public

Axway 5 Suite Solution

Axway API Gateway

Benefits

- Secure access to web services, unlocking information for partners, customers and employees

- Ease of reuse of web services in different applications, simplifying and industrializing the process of generating apps

- Process automation, eliminating the need to develop specific code to open up web services to external users

- Greater agility, so marketing initiatives can rapidly be transformed into targeted campaigns

- Rapid time-to-market for new apps, enabling Essent to differentiate itself from the competition

Innovator in the Energy Business
Leading producer of sustainable energy

The largest energy company in the Netherlands and the nation's leading producer of sustainable energy, Essent provides private and business customers with gas, electricity, heat and energy services. With two million customers, Essent is part of the RWE Group, one of Europe's five leading electricity and gas companies.

Essent has over 90 years of experience in generating, trading, transmitting and supplying electricity; it has been in the business of supplying gas for 150 years.

An innovator in the delivery of energy services, Essent is using Axway 5 Suite to enable services for partners, customers, employees and the public, over the Internet and through mobile apps. Axway API Gateway is used as Essent's web API, acting as its first line of defense.

Enabling Business Processes with Axway API Gateway
Unlocking information for partners, customers and employees

An ongoing business challenge for Essent was to simplify and industrialize the process of providing web services to its users, especially to enable mobile access. In 2009, the company started looking for a solution to enable web services for its four categories of users:

- **General public:** Members of the public needed to use web services via mobile applications and via the web — for example, to find charging points for electric vehicles.

- **Customers:** Essent's utility customers needed access to online self-service functions, so they could check their energy consumption, access invoices, manage contracts and use smart-home services.
- **Partners:** Essent's partners needed to provide information on the availability of charging points for electric vehicles; Essent would in turn make this data available to the general public.
- **Employees:** Essent employees would be able to access internal applications, such as one that records the time an employee spends on different projects.

Previously, Essent had developed its own security applications to manage its web services. "We spent a lot of time developing our own Java code and maintaining Java application servers to facilitate this business function," said Menno Abbink, Senior Enterprise Architect within the CIO office of Essent. "We were looking for a solution that would help us provide web services for our customer-facing portals. The solution had be robust from a security point of view and make our environment cheaper to maintain."

Choosing the Solution
Axway wins on technical capabilities, pricing and support

To compare solutions on the market, Essent issued an RFP, which included a demo. Vordel (now part of Axway) was invited to bid, and sent its leading technical experts, both for the demo and a later proof-of-concept (POC).

"Those guys were on site, demonstrating the solution and proving its capabilities," said Abbink. "When we found issues, within 20 minutes the issue would go straight to engineering, who helped us out and fixed it. We immediately saw that we would get dedicated support from Axway, and that has been the case ever since."

"Security standards and SAML 2.0 support were crucial for us," said Abbink. "Since this was to be a web services API, all capabilities around REST, XML, SOAP and data handling were crucial, as was integration with our enterprise service bus using XML over JMS."

In summary, said Abbink, "The Axway solution was selected because of its technical capabilities, pricing and support."

Re-engineering the IT Architecture
Using Axway API Gateway as a bridge to the world

The context for this investment was striking: to rationalize their information system, Essent decided to redesign its IT architecture from scratch, starting with a blank slate. The Axway solution was selected as a key element in the re-engineered architecture.

The goal was to obtain a service-oriented architecture (SOA) that would decouple Essent's robust back-end systems from lightweight web services. Essent termed the core back-end systems its "build-to-last" applications. The lightweight web services were termed "build-to-change" applications, as they would have a shorter lifecycle and evolve quickly with the market.

Between the two types of applications would be the integration layer, containing:

- **The enterprise service bus** (ESB), which communicates with core, build-to-last applications (such as CRM, ERP billing, etc.), exchanging approximately 39 million XML messages every day.
- **Axway API Gateway,** which is attached to the ESB and communicates with customer-facing, build-to-change applications, acting as a bridge to the outside world.

"For us, Axway API Gateway is the starting point for unlocking information for customers," said Abbink. "It unlocks all our internal web services, which are part of the service-oriented architecture, and securely makes them available to the outside world. It's our first line of defense."

To manage external communications, Essent implemented four security patterns, one for each of type of user: public, customer, partner and employee. "The main technical challenge was to implement these four types of security preferences and enforce them to ensure they are correct," said Abbink.

Ramping Up Production
Using Axway API Gateway as a powerful marketing asset

Today, Axway API Gateway secures a broad array of web services and mobile applications, with new uses constantly coming down the pipeline. For each service, Axway API Gateway acts as a "single front door," performing all procedures required for the relevant security pattern.

- **Enabling online business services**
  Today, Essent's two million customers can manage their utility contracts online using the Customer Self-Service Portal. The portal contains about 140 web services, providing an end-to-end self-service capability.

  The underlying web APIs can be reused as needed for other applications, enabling Essent to react quickly to market trends and launch its own marketing campaigns. Taking advantage of this, Essent runs a multitude of web-based apps for its marketing activities, all of which can use the same "API backplane" enabled by the Axway API Gateway.

- **Enabling mobile applications**
  "Four mobile applications are available within the iTunes App Store and Google Play," said Abbink. "These apps use Axway API Gateway as a secure environment in which customers can log onto the back-end systems to retrieve and modify their information."

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Menno Abbink
Senior Enterprise Architect
CIO Office
Essent

§ **Providing solutions for multiple platforms**
Essent uses Axway API Gateway as the underlying API layer for multiple platforms (web APIs and mobile apps) and multiple types of user communications (B2B and B2C).

A case in point is a service that helps Dutch drivers recharge their electric vehicles. Using Axway API Gateway, Essent obtains data from partners regarding the availability of charging points, and provides this information to the general public, either via web services or mobile apps.

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>
> Menno Abbink
> Senior Enterprise Architect
> CIO Office
> Essent

On the importance of Axway's solution to Essent, Abbink said: "The Axway API Gateway is crucial for our solution. It's an environment that must be on 24/7, because our customers expect a 24/7 self-service capability."

Axway API Gateway: A Proven Track Record
A differentiator for Essent

With the solution in production since 2010, Axway API Gateway now has a proven track record with clear benefits, including:

§ **Secure access to web services.** "Axway API Gateway unlocks our information for partners, customers and employees," said Abbink.

§ **Ease of reuse:** "All our web services can all be reused in different applications," said Abbink. "The Axway API Gateway really helps us do that."

§ **Process automation:** The Axway solution eliminates Essent's need to develop Java code and maintain Java servers, and automates the process of opening web services to external users.

§ **Greater agility:** With Axway API Gateway, marketing initiatives can rapidly be transformed into targeted campaigns, speeding time-to-market.

§ **Differentiation from competitors:** "Our rapid speed to market with new apps enables us to differentiate ourselves from the competition," said Abbink.

Abbink summarized his thoughts: "We expected the Axway solution to provide us with an easy-to-use, secure, proven technology to unlock information for our customers. And that's what it has been doing ever since."

Next Steps
Implementing a virtual data center in the cloud

Essent is planning to deploy a variety of new, groundbreaking services that rely on Axway API Gateway. New services currently under development include:

§ **"Social Login," for access via social media sites such as Facebook:** Essent customers will be soon able to log on to Facebook or Twitter to access their Essent accounts, with Axway API Gateway responsible for securing customer access.

- **Financial app for payments:** In the Netherlands, the banking community has developed iDEAL, an online payment method that makes it easier for customers to pay for online products and services. Essent will offer this payment method, with Axway API Gateway handling user authentication at the underlying API layer.

- **Smart metering:** Essent will use Axway API Gateway as the underlying API layer for smart-metering applications. For example, a smart meter located in the customer's home will send energy usage data to Essent over the home WiFi connection, when the customer choses to do so. In turn, the customer will be able to obtain this usage data via a mobile app.

In its next major IT initiative, Essent will deploy a virtual data center in the cloud. A pioneer in the use of cloud-based technology, Essent has relied on a leading third-party provider since 2009 to host its websites, customer-facing portals and marketing websites. Essent's virtual data center is designed to:

- Utilize elastic scaling capabilities: "We are currently moving Axway API Gateway from our traditional data center to the cloud, where we will start utilizing the elastic scaling capabilities it provides," said Abbink. "When we need to increase capacity, we'll just go to a web page and scale up."

- Minimize the time to market for customer-facing services. "By using a virtual data center, we won't have to keep track of changing hard disks and CPUs," said Abbink. "Everything will be virtually managed for us. It will be easy to deploy new versions of a product and enhance its capabilities."

Governing the Flow of Data
It's all about the customer

Finally, in its ongoing effort to govern the flow of data, Essent will implement the data analytics capabilities provided in the latest version of Axway API Gateway. "Our target architecture is to ensure end-to-end traceability," said Abbink.

Furthermore, he said, "I think it's crucial to govern the flow of the data, not only from a risk-management and fraud-detection point of view, but also to optimize the quality of service and end-user experience. It's all about the customer."

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For more information, visit www.axway.com

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