



SUCCESS STORY

StarMobility

Secure Web Services in the Automobile Telematic Industry

Solution Summary

Industry

Automobile telematic

Challenge

Find a solution to secure communication with content providers using the existing Apache Axis Framework.

Solution

VeriSign® TSIK

Results

- Content providers can be linked to StarMobility using a secure, separate concept
- Every interface to a content provider can be isolated and individually controlled with ease
- The security concept can be integrated into the application layer of the architecture

The beauty of the Internet is its ability to provide instant access to information. StarMobility extends this convenience by ensuring that users en route always have access to information via a specialized portal. The company, a subsidiary of DaimlerChrysler, specializes in providing multi-channel telematic services for the automobile industry.

Using a range of devices, such as PDAs, smartphones or special built-in head units, users can access navigation and Internet services, including email, calendar, and SMS functionality while travelling in their car. This ensures users are always “connected.” StarMobility also provides users with comprehensive travel and infotainment services. For example, users can obtain information on events and stock market news, as well as access dynamic city maps and traffic reports, and call up points of interest such as hotels, restaurants, and nearby parking places.

Founded in 2001, StarMobility provides tailor-made portal services to car manufacturers who offer it under their own brand to their customers. For example, smart cars can be delivered with pre-configured StarMobility services. These services help the manufacturer to differentiate their vehicles from the competition, intensify their relationship with their customers, and support their image as a leading and innovative enterprise.

+ Security: a Key Concern

As the portal architect responsible for designing the back-end systems that enable StarMobility to deliver its services, Michael Machaczek has always emphasised security as a key issue. “The nature of our business means we have numerous Internet connections. We have multiple content providers who provide us with diverse information. We collect and combine this information and transmit it to the device in the user’s car.



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Michael Machaczek
Portal Architect,
StarMobility

With so many different network connections open, our challenge has always been how to make the system as secure and stable as possible?"

Until recently, StarMobility had two ways of implementing data security during transmission. They could upload data from a content provider using HTTP or FTP. Or they could run HTTPS and establish a VPN tunnel for end-to-end connection and work with each provider in an encrypted mode.

"Both approaches have disadvantages," comments Machaczek. "They are entirely dependent on the transport layer of TCP/IP for security. With HTTP and FTP, for instance, it meant there was in effect no security. Anyone could intercept or manipulate the transmitted information. And the HTTPS approach is far more complex and work intensive," explains Machaczek.

Since joining StarMobility in 2002, Machaczek has implemented a granular concept so that each and every content provider interface is linked to StarMobility in an isolated and separately controlled manner. As the basis for communication with content providers, StarMobility uses Apache Axis Framework. Apache Axis supports industry standard Web Services Security (WS-Security), which includes digital signature and encryption components. Machaczek believed the solution lay in adapting these standards to StarMobility's needs.

"We intensively researched the subject and the decision to go with VeriSign was a simple one: They were the only supplier with a product that had the ability to support the Apache Axis solution. They were very quick off the mark and had a one-and-half year start on everyone else," says Machaczek, recalling the research process.

In fact, VeriSign was one of the three companies (along with IBM and Microsoft) that together drafted the WS-Security standards that were first released in April 2002. The VeriSign Trust Services Integration Kit (TSIK), a Java™-based developer toolkit for integrating security capabilities into Web services, reflects these standards. The APIs enable developers to rapidly integrate digital trust services, such as secure XML processing to authentication, real-time certificate validation, authorization, and payments.

+ Checkpoint to a Secure Solution

To check the validity of the solution, StarMobility first adapted TSIK-based WS-Security into its Apache Axis Framework backbone, and then extensively tested it at the end of 2003 and the beginning of 2004. The tests simulated a connection between a "real" content provider with StarMobility in terms of both data volume and transmission speeds.

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With the concept tested and proven, the next objective of StarMobility is to implement a full solution that will provide a far higher level of security and trust. While this project is still in the feasibility study stage, Machaczek said he is personally looking forward to the day when it can be realized. In the meantime, he describes VeriSign TSIK as "the first and the best solution currently available."

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