



HAMBURG WASSER

Protecting Web applications for customers

Over 30,000 Hamburg households can use the Internet to find out more about their water consumption patterns, their meter readings and bills. With only a few mouse clicks customers can electronically inform Germany's largest municipal drinking water supply and wastewater disposal company when they change banks or move house. Airlock WAF has been guarding this online service since June 2006. Since May 2007 Airlock WAF has also been protecting the communications of some 1,700 company employees use the Lotus Notes groupware system.

All of HAMBURG WASSER customers can use the online service to manage their personal data. This includes authorising direct debit, changing bank account details, submitting the meter reading, change of address, viewing the water bill and adjusting the monthly advance payment rates.

"We wanted to create centralised, safe access through which future systems will also connect securely to our SAP-based Web applications," recalled Peter Saile, System Planning Manager at HAMBURG WASSER. The group turned to secunet Security Networks AG, who had provided consultation on IT security issues in the past. "The advice from secunet, the scope of services and the good references convinced us that Airlock WAF was the correct solution", explained Saile.

Sensitive customer data protection

The system should fully protect bank account details, addresses and other sensitive customer data reliably from potential external "onlookers". "Several months down the line, we also gave the same protection to our Lotus Notes email system with the Web Application Firewall (WAF). More systems are set to follow," commented the IT expert. With this solution HAMBURG WASSER has an extremely modern approach to Web application protection at its disposal. From the outset the security concept is designed to remove all security-relevant points of attack that may compromise Web applications.

Rules for the use of the offered Web contents are precisely defined. "Visitors", who stick to these rules can use the offered Web contents and services. The authorisation to use the provided services is immediately removed for anyone who moves outside the defined code of behaviour.

"We attribute the success of the project to the good cooperation between HAMBURG WASSER, secunet and the Airlock team as well as to the dovetailing between the solu-

tion provider and product vendor. This is an example of how the direct communication channels between the Airlock team in Germany and Switzerland really pay off", explains Uwe Demsky, responsible for the project at secunet as key account manager.

Web Application Firewall launch

Ten consultant days were planned for the implementation. All in all, the internal effort required an extension and took some 15 days. Saile recalls: "The initial installation ran smoothly and was completed within just a few hours. The basic customising demanded extensive network know-how, while basic instruction was required to set up the address areas for front end, back end and for system management." Another challenge was the precise definition of WAF filter regulations. "Final questions could however be resolved quickly subsequent to intense product training and with straightforward support from the Airlock team."

At the same time the Airlock validation revealed weak spots in the Web application's source text so that they could be resolved simply. And how have the first few weeks with the new online protection been? "The management interface is clear and easy to use. It would be helpful to view the log information within the Web interface – but that feature is included in the new version 4.1 anyway," explained Saile. Since using Airlock WAF for Web mail the HAMBURG WASSER employees can download their mails at any time from the Internet without having to worry about undesired intruders. In addition the IT department can also guarantee back end system protection.

The solution at work

The following explains the WAF at work: Important, confidential information is transferred via a public network, and thus has to be completely protected against unauthorised attacks. Airlock's multilevel filter monitors the requests to the Web application at different levels. The first step involves testing the individual user's identity and authenticity. Ten filter levels including a network level filter, SSL termination, protocol validation, character encoding and uniform code validation, cookie protection, preceding authentication, blocking attacks, URL-encryption, smart form protection as well as response content filter and rewriting ensure a strong security network. At the same time the WAF allows the infrastructure to be optimised and streamlined, since the operating system neither has to be configured nor administered and a modification or integration of client or applications software is not required. The Web Application Firewall precedes the Web server and thus relieves it of any security tasks. As such, unauthorised requests are blocked automatically by the

extensive filtering and non-authorised users rejected by the preceding authentication.

Proven and tested

Airlock WAF is based on the hardened Solaris 10, an extremely robust operating system with secure zone architecture and RBAC support (role-based access control). HAMBURG WASSER's system planning manager and his colleagues were very pleased with the system: "We are really delighted to have found a system designed for these fundamental Web application security requirements. Based on the current status, HAMBURG WASSER will continue to monitor its security systems regularly in the future, extending these if necessary. Following the successful implementation of Airlock WAF the path is now free for further Web applications such as Internet portals for the likes electricians and property management companies," summarised Saile.



"The initial installation ran smoothly and was completed within just a few hours. The management interface is intuitive and easy to use."

Peter Saile, System Planning Manager at HAMBURG WASSER

About Ergon Informatik AG and Airlock Suite

Founded in 1984, Ergon Informatik AG is a leading developer of bespoke software solutions and products. The cornerstone of our success: 235 highly qualified IT specialists who are committed to creating value for the client, anticipating technological trends and designing solutions that generate competitive advantage. Ergon focuses on implementing major B2B projects.

Airlock Suite deals with the issues of filtering and authentication in one complete and coordinated solution – setting standards for usability and services. Airlock, our security product, was launched on the market in 2002 and is now used by 300 customers around the globe.

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