

User-friendly and Secure Communication at Rohde & Schwarz



STARTING POINT AND OBJECTIVES

The best email encryption is of no use if your staff does not actually use it. Rohde & Schwarz discovered this in its own ranks. The company decided to introduce a more comfortable, user-friendly encryption solution because the existing solution was too complex to use. Thanks to totemomail[®] Rohde & Schwarz was able to broadly increase the use of email encryption in the company and in turn significantly raise the level of security.

Rohde & Schwarz GmbH & Co. KG is known worldwide for its highly professional communications technology, particularly in the area of high frequency technology. Moreover, with headquarters in Munich, the company is among the largest German manufacturers of IT security products today. It goes without saying that in this environment, great importance is attached to secure communication – even in-house.

Rohde & Schwarz had been using email encryption for years. The solution was based on symmetric encryption, which means that sender and receiver use the same key. But the company wanted to further raise the security level and switch to an asymmetric encryption

method with public-key infrastructure. The old solution was to be replaced with an S/MIME-based solution.

However, compared to symmetric encryption, this new system did not gain much acceptance because it was very cumbersome to use. Employees had to use their employee ID card, which contained a smart card, to decrypt or sign an email. In addition, the recipient first had to send the sender his/her public key so that he/she could send an encrypted message. Moreover, the company had strict guidelines about which emails should be encrypted and how. Different encryption techniques were required depending on the security level of the recipient. "All of that was very complex,"

recalls Alexander Gehrig, IT Security Administrator at Rohde & Schwarz and at the time head of the 'Introduction of email encryption based on email classification' project. "This led to a situation in which

employees continued to use the old solution on the basis of symmetric encryption, which we actually wanted to replace. Or they didn't use any email encryption at all."

REDUCING COMPLEXITY AND INCREASING SECURITY

To increase security and make it easier for users to use encryption, Rohde & Schwarz decided to introduce a new encryption solution again. It was meant to replace the existing sprawling systems and reduce complexity. First the project managers spoke with the representatives of individual business units to inquire about their requirements. It quickly became clear that all involved wanted encryption based on information classes. This type of encryption was to no longer depend on the senders and recipients but on the content. What was required was a simple user interface that could be used to select the respective security

level. All other processes should run in the background to relieve employees and transfer the complexity as much as possible away from the users and into the IT.

The new solution should also be available offline and above all platform-independent so it can be used on any devices. Likewise, the integration of mobile devices was especially important. For this, the solution had to be compatible with the mobile device management system used in the company. Network printers and scanners also needed to be integrated, so that confidential documents are encrypted automatically.

Another requirement was that the solution work with the existing Lotus Notes infrastructure and support the S/MIME and PGP encryption standards. The key material should be able to be saved on hardware security modules (HSM), ideally on those already used in the company. It was also important that the solution could be centrally managed for other locations since Rohde & Schwarz has subsidiaries worldwide. In addition, the company wanted a way to communicate securely with external partners who do not use email encryption themselves.

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Alexander Gehrig, IT Security Administrator, Rohde & Schwarz



FROM PROOF OF CONCEPT TO THE LAUNCH

The list of requirements was long and the bar was high. After the initial evaluation phase, Rohde & Schwarz decided to comprehensively test three different solutions in a proof of concept. In the end, the company was won over by **totemo**. Alexander Gehrig explains: "We also had another product by a major American manufacturer, which was very powerful in itself. But in order to reach our goals, we would have had to adapt the solution by 70%. However, with **totemo**, the amount of customizing we needed to do was very low. We were also very pleased with how fast **totemo** implemented our change requests in the test run. A major American manufacturer wouldn't have taken that approach." Also pivotal for the selection was that a long-standing IT service provider for Rohde & Schwarz had already had good experiences with **totemo**. Rohde & Schwarz introduced the **totemomail**[®] Encryption Gateway for external communication and **totemomail**[®] Internal Encryption for encrypting internal communication in 2015. The company selected

totemomail® WebMail for external partners who do not use any encryption. Recipients can use it to retrieve encrypted messages through a web portal after they have authenticated themselves with their user name and password. The introduction of the solutions went smoothly. **totemomail**® could be adapted with very little effort, even when Rohde & Schwarz decided to change the communication infrastructure and migrate to Microsoft Exchange. 99 percent of the existing encryption infrastructure could be directly adopted.

A RESOUNDING SUCCESS: HIGH ACCEPTANCE RATE AND ENORMOUS TIME SAVINGS

Rohde & Schwarz was able to significantly reduce the complexity of email encryption for its employees with **totemomail**®. Users now choose which security level their message corresponds to in their email client; they do not have to concern themselves with anything else. The system takes care of everything else automatically and applies the previously defined encryption techniques in the background. Thanks to very flexible policy options, users can still choose the encryption as needed.

Key management is centralized in the backend. This not only relieves the users, but also ensures greater security. Users no longer make any mistakes here. In the past, it had occurred that people ignored

alerts and used S/MIME with an outdated certificate. But today if a user needs a certificate, it is automatically signed by the certificate provider within a few seconds and is ready for use. This is possible because the certificate provider is integrated in **totemomail**®. Previously, administrators had to import the certificates manually.

Since the introduction of **totemomail**®, Rohde & Schwarz has been able to broadly increase the use of email encryption in the company and in turn significantly raise the level of security. The new information-class-based solution is also attracting interest from external partners. Rohde & Schwarz can now gather statistics on how encryption is used and

what security levels have been applied. These insights help generate business. Alexander Gehrig summarizes: "We are very satisfied with the **totemomail**® solution. It is extremely flexible and very easy to use. Compared to before, it saves us a huge amount of time. We have found a good partner with **totemo** – one with whom we will certainly cooperate for a long time."



ABOUT ROHDE & SCHWARZ

Rohde & Schwarz GmbH & Co. KG is one of the world's leading manufacturers of communication technology for professional users. Around 2,700 employees work in the company headquarters in Munich, Germany. Founded 85 years ago, the technology group also has subsidiaries and representations in more than 70 countries. Initially, Rohde & Schwarz focused on high-frequency technology and its applications in measurement technology, radio, and broadcasting. In recent years the business area has expanded. The digital transformation of technology, economy, and society into a networked world requires the integration of IP-based communication technology into almost all future products. It can only succeed on the basis of reliably high data security. Rohde & Schwarz has therefore embraced this field of activity and is now one of the largest German manufacturers of IT security products.