



## Global and secure certificate distribution for all environments



### THE END CUSTOMER

#### A leading energy group

The end customer DXC Technology is one of the world's largest private energy groups, and is consistently focused on the new energy landscape, including renewable and decentralized energy generation, energy efficiency, and digital solutions. Demands, therefore, are high: Everywhere the company is active, the world of energy should become cleaner and better. The demands placed on IT security are likewise high, partially due to regulatory requirements such as the IT Security Act for Operators of Critical Infrastructure (KRITIS).

### THE INITIAL SITUATION

#### Migration & cost reduction

A migration project set the stage for a new system for issuing digital certificates, called a Public Key Infrastructure (PKI). DXC Technology was tasked with converting the previous system with approx. 70,000 certificates and smart cards into a new, forward-thinking, and more flexible PKI. The focus was on making PKI operations more flexible and more standardized and lowering costs. This was intended to eliminate cost-intensive central PKI registration offices, which were not available in all areas or at all times.

### THE CHALLENGE

#### Flexible or secure personalization?

The previous PKI was only somewhat suitable for the new requirements of mobile work in a modern, global company. Instead of having to go through extensive central processes, in the future users should be able to directly personalize smart cards on their own computers using a user self-service mode. However, user computers where personalization and user self-service will be handled are not considered secure, especially outside of the secure company network. Sensitive information such as private encryption material in electronic certificates is transferred from

the back end to the user's smart card through networks and the user's computer in order to complete personalization. One specific challenge was secure end-to-end encryption from the back end to the smart card, in order to handle the two goals of increasing flexibility and maintaining safety. Global and secure certificate distribution for all environments

### THE SOLUTION

#### cgTunnel

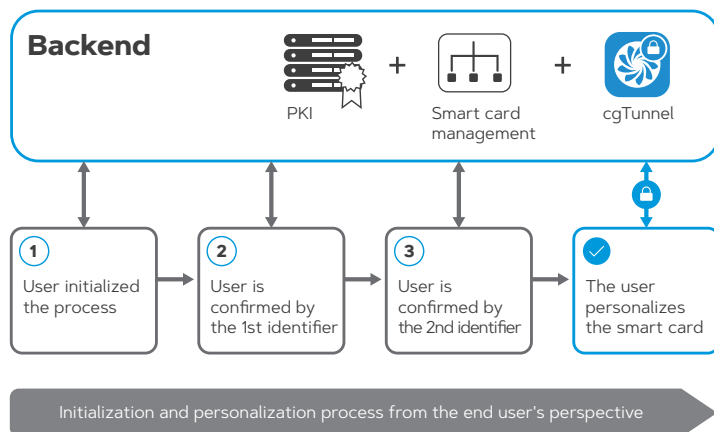
A modern PKI infrastructure was implemented alongside DXC Technology. User certificates are generated centrally and issued in a decentralized manner. A central smart card management system administers all smart card processes, such as personalization, in which certificates are saved on the smart card with a private key.

The patented certgate cgTunnel solution is a central component which protects the administration and controlling of connections between the backend and the user's computer. A secure communication channel ensures secure end-to-end encryption is established between the central smart card management system to the smart card through networks and the user's computer.

Employees can now personalize their smart cards within a few minutes worldwide and around the clock, completely independent of any branch, home office, or customer location. In the past, they always needed to go to a branch during the business hours of the specific PKI registration office.

### HIGHLIGHTS

- ✓ Initializing and personalizing smart cards in user self service
- ✓ 70,000 PKI users
- ✓ Cost reduction
- ✓ Improved flexibility
- ✓ Accelerating processes in the smart card life cycle
- ✓ Maintaining the current security level
- ✓ 24/7 global availability



The personalization process Process Flow in User Self-Service

## CONCLUSION

### Flexible, secure, and inexpensive personalization!

Using cgTunnel allowed the customer to achieve the defined project goals of added flexibility and substantially lower costs while increasing security. This saves employees from having to make expensive trips to the PKI registration office, replacing them with user self-service available 24/7.

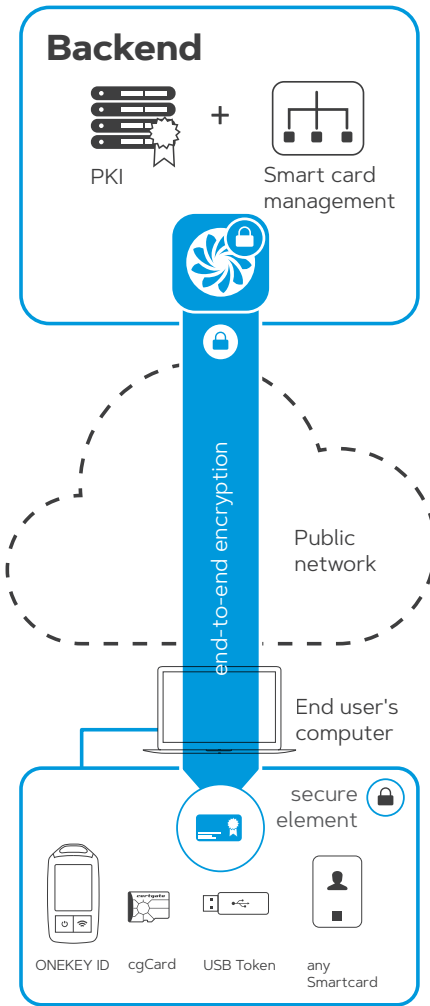
The company decided on cgTunnel for secure, decentralized personalization after evaluating alternatives. The Microsoft proprietary remote desktop protocol (RDP) is much more complex and results in substantially higher licensing costs. Other concepts such as a virtual private network (VPN) or encrypted data transmission via Hypertext Transfer Protocol Secure (HTTPS) and Secure Sockets Layer (SSL) lack consistent end-to-end encryption to the smart card.

Standardized cgTunnel interfaces have simplified system integration for DXC Technology. The excellent scalability of cgTunnel also ensures the overall system is available during peak loads, which are difficult to plan. Its good flexibility also ensures that it will be able to meet future requirements, such as personalization on smartphones, efficiently.



## cgTunnel

cgTunnel is an internationally patented technology for the secure transfer of certificates and private key material from a central system to globally distributed devices or their smart cards. All data is transmitted end-to-end encrypted directly to the end user's smart card. cgTunnel enables secure, cost-effective and globally scalable decentralized personalization of smart cards.



Secure certificate distribution with cgTunnel



*„cgTunnel reliably and cost-effectively meets the high requirements of our customers for the secure global distribution of certificates. certgate manages projects successfully and on time. Just as you'd expect.“*

## About certgate

certgate is one of the leading IT security providers for secure, mobile communication technologies and a member of the alliance „IT Security Made in Germany“ for many years. Internationally leading companies and authorities such as the German Federal Employment Agency and state security authorities in other countries secure their mobile communication through certgate's patented technology and products. certgate's solutions are also distributed through partners worldwide and enable real protection against

hackers, mobile data leakage and unauthorized access – also by governmental authorities. certgate already provides sustainable protection for the mobile communication and data for thousands of users daily worldwide today.

Find out today why secure communication is recommended as essential by many leading experts under: <https://www.certgate.com/why-using-encryption>



certgate GmbH  
Merianstrasse 26  
90409 Nürnberg  
Germany

Phone + 49 (0) 911 93 523-0  
E-Mail: info@certgate.com

Web: [www.certgate.com](http://www.certgate.com)