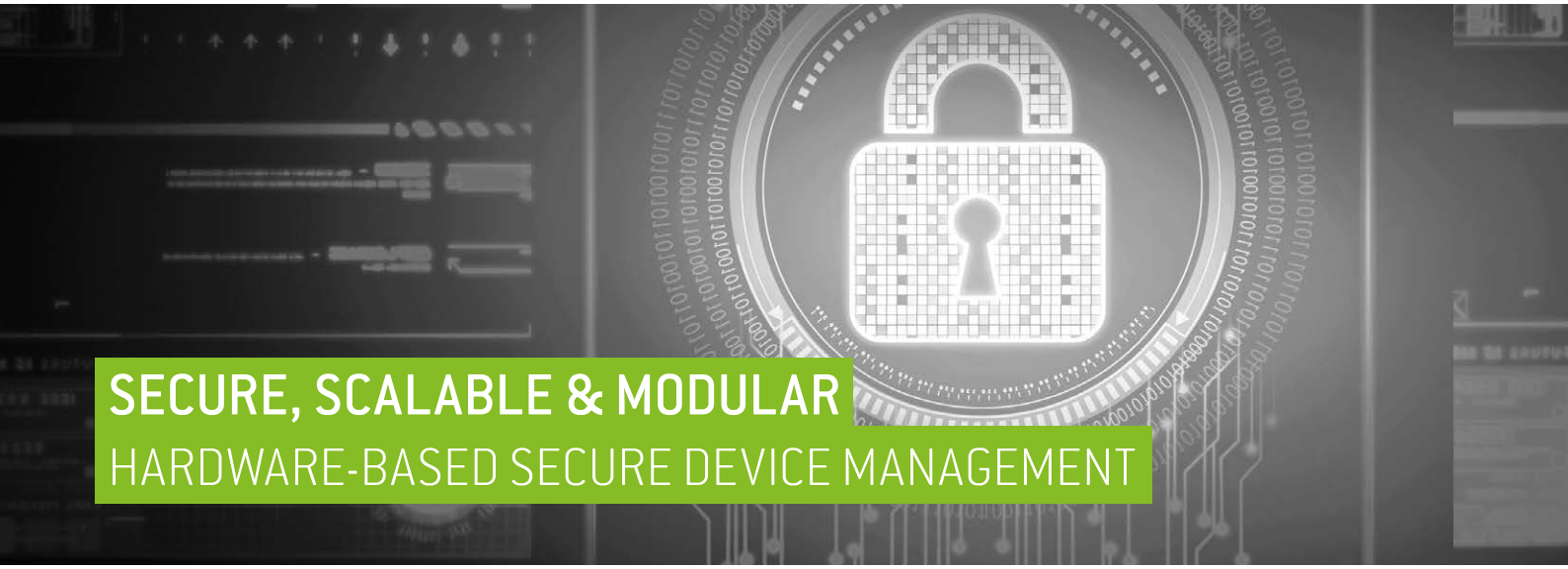
exceet CONNECT TRUST

exceet SECURE SOLUTIONS



SECURE, SCALABLE & MODULAR
HARDWARE-BASED SECURE DEVICE MANAGEMENT

Connectivity in modern, globally distributed networks poses a whole set of new challenges for state-of-the-art IoT solutions. Because this connectivity promises enormous potential, few businesses can afford to ignore the trend and its possibilities. At the same time, however, they must take on new security challenges – challenges that traditional IT has not yet addressed. Many of the connected devices are located in places beyond the physical control of the company, and therefore they are vulnerable to manipulation.

Unlike traditional IT, the issues do not involve servers or computers located in data centers or office buildings, but rather devices operating in completely unprotected environments. Often, they may be built-in components of cars, construction machinery or other mobile objects.

FEATURES

- Certificate-based authentication of field devices
- Secure service operation in the ISO 27001-certified eSS data center
- Developed with a focus on long-term security in connected solutions, relying on state-of-the-art cryptography methods and hardware-based chips to protect sensitive data
- Transport encryption for confidential communication between device and infrastructure
- Secure remote updating of field device software
- Automated lifecycle of device identities (from generation to disposal), with due consideration of security requirements

CLIENT BENEFITS

- Implementation of M2M and IoT-related business models, based on fully secure connections between hardware and digital services
- Reduction of on-site service costs via secure remote updating of field devices
- Extended lifecycle of field devices thanks to secure upload or release of new soft-ware features and licenses
- Flexible expansion / reduction of the client's trust-ed ecosystem via inclusion of additional certification entities (subscriber management)
- Secure and unambiguous identification of field devices (authenticity)
- Secure communication between devices and infrastructure (confidentiality)

TECHNICAL DATA

Protocols and Algorithms

TLS v1.2, GP SCP '03', AES, SHA (-2 and higher), ECDSA

Status Sources for Blocking Information

- OCSP in the infra-structure for field devices
- CRL on the devices for the infrastruc-ture components

Supported Standards of exceet PKI

- X.509 Certificate v3 (RFC5280)
- X.509 CRL v2 (RFC5280)
- CMP (RFC 4210, RFC 4211)
- Common PKI 2.0

Certificate Request Formats

- PKCS#10 (RFC 2986)

SECURITY ACROSS THE ENTIRE DEVICE LIFECYCLE

So how do you build trust in such an environment? How do you ensure that you are communicating with the right device, and to what extent can you trust the data you receive? The answer to these questions is: **exceet connect TRUST**

exceet connect TRUST implements a unique end2end security concept that provides security across the entire lifecycle of a device, relying on hardware-based cryptographic chips similar to those found in banking cards.

Part of this strategy is that already during production, the device – e.g. a gateway – is assigned a counterfeit-proof digital identity that can be used to unambiguously identify the device wherever in the world it connects to a network.

In this way, it can be allocated to a customer or user group and integrated into a closed "sphere of trust".

A perfect combination: **exceet connect TRUST** and the high-security exceet Gateway. Together, **exceet connect TRUST** and the exceet Gateway create secure and scalable trusted ecosystems.

EXCEET GATEWAY AND TRUST!

MORE THAN TRANSPORT ENCRYPTION

	NO SECURITY	SOFTWARE SECURITY	VPN	TRUST
Transport encryption	✗	✓	✓	✓
Mutual authentication	✗	✓	✓	✓
Secure remote update	✗	✗	✓	✓
Secure boot	✗	✗	✗	✓
Hardware based protection for sensitive data (keys, trust anchor)	✗	✗	✗	✓
Secure element management in field	✗	✗	✗	✓
File system encryption	✗	✗	✗	✓
Flexible extendable trust anchor for gateways	✗	✗	✗	✓
Automated certificate lifecycle management	✗	✗	✗	✓

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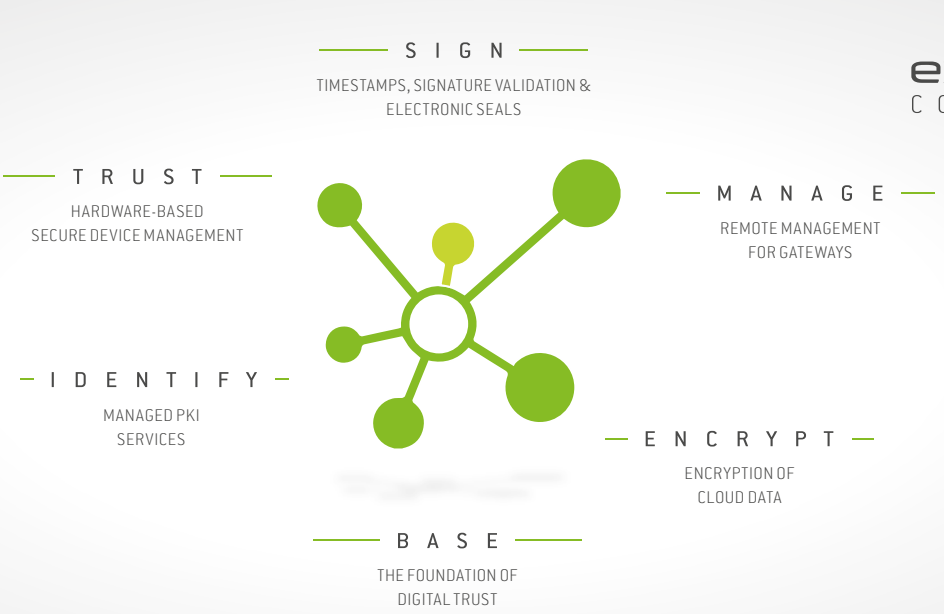

About exceet

Create Digital Trust - exceet Secure Solutions builds trust in a digital world. As a member of exceet Group, we deliver secure, connected electronics solutions that drive our clients' digital business models. We bundle hardware and software to create perfectly tuned end2end solutions that offer long-term investment security.

exceet Secure Solutions GmbH
Rethelstraße 47
40237 Düsseldorf

Phone: +49 211 436989 0
Fax: +49 211 436989 19
E-Mail: info@exceet-secure-solutions.de

www.exceet-secure-solutions.de