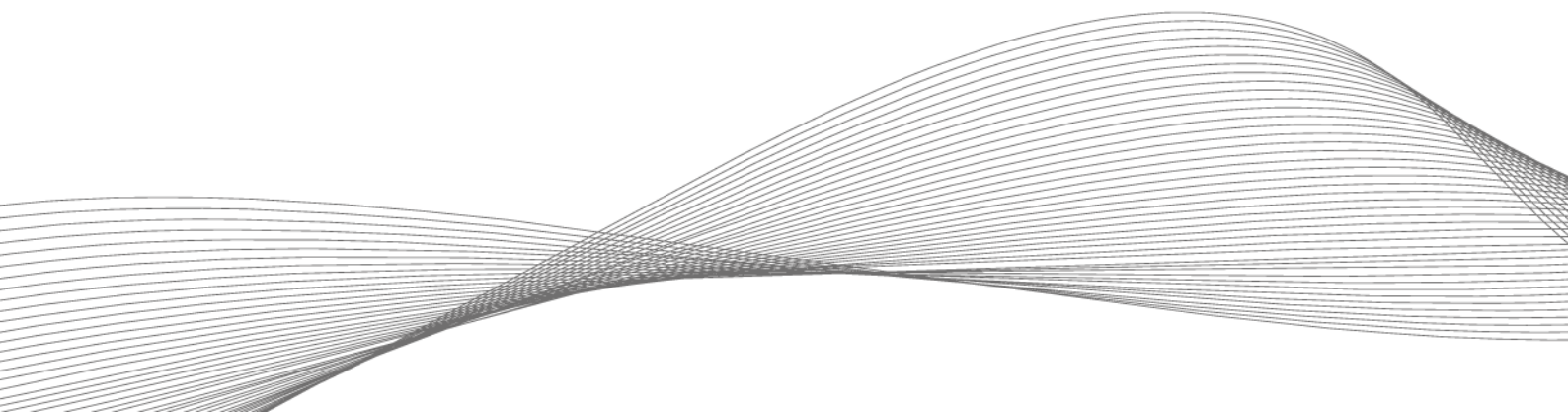


SECURITY IN THE DIGITAL WORLD WHY CONVENTIONAL PASSWORDS ARE NO LONGER SUFFICIENT



Secure single sign-on without a password thanks to Elatec's authentication solution via smartphone. © Elatec



Passwords have long been the most common method of authenticating users in digital systems. However, they are reaching their limits in today's networked and increasingly digital world. Managing passwords is a significant challenge not only for IT departments, but also for users themselves. Traditional passwords are also extremely vulnerable to misuse and hacking attempts. According to a representative survey conducted by Ipsos on behalf of the TÜV association , one in ten German companies registered an IT security incident last year. This includes both successful cyberattacks and other security-related incidents such as acts of sabotage or hardware theft.

The weaknesses of traditional passwords

Conventional passwords are usually easy to guess or decrypt as they often consist of simple words, dates of birth or other personal information. According to an analysis by the Hasso Plattner Institute¹ , the most popular passwords in Germany are still strings of numbers such as "123456" or words like "password." This simplicity makes them a favorite target for cybercriminals, who are developing ever more sophisticated methods to gain access to sensitive data. These attacks can have serious consequences for affected users and organizations. According to a survey by the TÜV association, 42 percent of companies suffered financial losses, while 38 percent were temporarily unable to offer their services to employees or customers (29 percent). In 13% of cases, production was disrupted, and in a further 13%, sensitive data was stolen.

Guidelines and laws for corporate IT security

IT security in companies is an important issue that is increasingly enshrined in law. To ensure a high level of security, companies must comply with a number of important guidelines:

1. **NIS2 Directive:** This European directive aims to strengthen the protection of critical infrastructure against potential IT incidents and cyberattacks. It affects companies (including public institutions) in various sectors, such as energy, transport, banking, healthcare, manufacturing and many others, that have at least 50 employees and an annual turnover or annual balance sheet total of at least 10 million euros. From October 18, 2024, reporting obligations and requirements for necessary security measures will apply. Non-compliance could result in high fines² .
2. **IT Security Act:** This German law aims to improve the security of information technology systems. Among other things, it stipulates that operators of critical infrastructures (KRITIS) must take appropriate organizational and technical precautions to prevent and manage IT security incidents³ .
3. **BSI Standard 200-1:** BSI Standard 200-1 defines the requirements for an information security management system (ISMS) and shows which organizational and technical measures companies must take to protect and improve their IT security⁴ .

After these guidelines and laws form the formal framework, the German Federal Office for Information Security (BSI) also offers practical recommendations for companies. The "10 tips on cyber security from the BSI" cover everyday measures that companies can take to improve their IT security. These include regularly updating software and operating systems, using secure passwords and continuously training employees. These tips supplement the legal requirements and contribute to a comprehensive security concept.

¹ <https://hpi.de/pressemitteilungen/2022/die-beliebtesten-deutschen-passwoerter-2022.html>

² <https://www.leipzig.ihk.de/infos-fuer-unternehmen/themen/business-digital/it-sicherheit/nis2-richtlinie-neue-gesetzliche-anforderungen-fuer-unternehmen-zur-it-sicherheit/>

³ <https://www.dataguard.de/blog/informationssicherheits-gesetze/>

⁴ <https://www.tuev-nord.de/de/unternehmen/bildung/wissen-kompakt/informationssicherheit/gesetze-und-normen-zur-it-sicherheit/>

Modern authentication solutions as an alternative

To overcome the challenges of traditional passwords, innovative authentication solutions such as Single Sign-On (SSO) using technologies such as RFID, BLE and NFC are available. Elatec, as a global leader in this field, enables secure single sign-on without a password by using a card or smartphone for authentication. By using these technologies, companies can improve their IT security and, at the same time, create a user-friendly working environment for their employees.

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