

Alle Angaben ohne Gewähr. Keine Garantie auf Vollständigkeit oder Richtigkeit.

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1 Introduction

1.1 Motivation

Influencing factors of secure software include

- **Security features:** Authentication, Authorization, Access control, cryptography, etc.
- **Technology:** Programming languages, development tools, etc.
- **Operational environments:** Firewalls, Intrusion detection systems, etc.

1.2 Terminology

- **Asset:** anything that has value to an organization, including human, physical, information, intangible and environmental resources (ISO 22300:2021)
- **Thread:** potential cause of an unwanted incident, which could result in harm to individuals, assets, a system or organization (ISO 22300:2021)
- **Adversary:** any person or a thing that acts (or has the power to act) to cause, carry, transmit, or support a threat Mussa and Malaiya (2015)
- **Vulnerability:** weakness of an asset or control that can be exploited by one or more threats (ISO/IEC 27000:2018)
- **Exploit:** method that identifies and takes advantage of a vulnerability in an asset Mussa and Malaiya (2015)
- **Attack:** attempt to destroy, expose, alter, disable, steal or gain unauthorized access to or make unauthorized use of an asset (ISO/IEC 27000:2018)

1.3 Protection Goals

- **Confidentiality:** property that information is not made available or disclosed to unauthorized individuals, entities, or processes (ISO/IEC 27000:2018)
- **Integrity:** property of accuracy and completeness (ISO/IEC 27000:2018)
- **Availability:** property of being accessible and usable on demand by an authorized entity (ISO/IEC 27000:2018)
- **Authenticity:** property that an entity is what it claims to be (ISO/IEC 27000:2018)
- **Possession:** holding, controlling, and having the ability to use information Parker (2015)
- **Utility:** usefulness of information Parker (2015)

References

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