Access Control Systems [WIP]
Models and Technology
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Alle Angaben ohne Gewähr. Keine Garantie auf Vollständigkeit oder Richtigkeit.

1 Introduction

1.1 What is Access Control?

1.1.1 Definition according to OSI Basic Reference Model (1989)

- **Access Control**: "The prevention of unauthorized use of a resource"
- **Authorization**: "The granting of rights, which includes the granting of access based on access rights"
- Listed as a **security service**: "This service provides protection against unauthorized use of resources"
- Based on **policies**: "The control of access will be in accordance with various security policies"

1.1.2 Aspects of Access Control

- **Policy**: Focus on models, specification of security policies (What does it mean to be secure?)
- **Enforcement**: Focus on technologies, design and implementation of systems (How do we make it secure?)

1.2 Creating and enforcing policies

Classification by [Nobi, 2022]:

- **Policy Authoring/Engineering**: Define a policy model and access control rules
- **Policy Verification and Testing**: Test for leaks or contradictory privileges
- **Policy Administration**: Maintain and update policies/configurations
- **Policy Enforcement**

References

[Nobi, 2022] Nobi, M. N. (2022). *Towards Machine Learning Based Access Control*. PhD thesis, The University of Texas at San Antonio.