

# Comparative Study on Cyber Security Assurance Models

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## Abstract

A "cybersecurity model" is a term that can describe all the requirements necessary to ensure basic security properties (privacy, availability, integrity) and represents a formal description of a policy or a set of security policies. A security policy specifies what should be done, while a security mechanism describes how available security technologies will be implemented (so, a security mechanism enforces part of security policy). The main components of a cybersecurity model are resources, users and a set of relationships between these two entities. This paper makes an assessment of main mathematical models to ensure cyber security and highlights the advantages, disadvantages and the context in which each of them can be adopted.

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