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CIA Triad

BLUF: The CIA Triad stands for confidentiality, integrity and availability. This is a model used to control policies on information security for organizations (Chai 2022). Authentication confirms a user's identity and Authorization controls what a user can do (Singh 2025).

The CIA Triad consists of three categories to keep information systems safe and protected. Confidentiality is ensuring that sensitive information is only accessible to those that need to know. For example, logging into an account that requires a password is a simple example, another example is becoming used nowadays is two-factor authentication. Integrity is making sure user's information is correct and not changed improperly. An example includes checksums which is data that detects any errors or unauthorized changes. Availability is having all information available when user needs it. For example, a company using cloud storage to be able to access certain material.

Authentication and Authorization are two important security processes that are used to control access to systems and data. Authentication is a process to verify the identity of a user. Authorization allows access rights and permissions to an authenticated user (Singh 2025). An example of authentication is when we put in our login and password the system will authenticate it with this information or by using a multi-factor authentication. An example of authorization is

logging into your bank account and being able to access your funds but other settings that may require further assistance from the bank.

In conclusion, the CIA Triad is a basic model followed by organizations to ensure information security. It's a security strategy that includes policies and security controls to mitigate threats (Washington 2026). Both authentication and authorization connects to the CIA Triad as it confirms and controls user's identity.

References:

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Singh, M. (2025, December 1). *Authentication Vs Authorization*. Retrieved from <https://www.geeksforgeeks.org/computer-networks/difference-between-authentication-and-authorization/>

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