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<u>The CIA Triad: Keeping Your Organization's Information Safe</u>

The CIA Triad has protected organizations and their data with their carefully crafted set of guidelines and principles. While many claim they need improvement, they have set the standards on how clients can keep their information and in their control. Clients also learning what the differences of authentication and authorization are can improve their knowledge and skills of protecting their identity and sensitive information online.

<u>What is the CIA Triad?</u>

The CIA Triad is a set group of policies and guidelines to maintain data and information security within an organization (Chai, 2022). CIA stands for confidentiality, integrity, and availability, and each pillar is used to identify and nullify vulnerabilities and threats in security systems (University of Tulsa, 2024). The three parts of the triad do not work individually, rather they operate as a group that work together to maintain information security for organizations and their clients.

<u>Confidentiality</u>

Confidentiality is the practice of keeping sensitive information safe and restricting access from outside parties that may want to exploit the information for monetary gain. Specific cyber threats can be categorized depending on the amount and type of damage that can be done to stolen information and different procedures can be implemented for each category (Chai, 2022).

<u>Integrity</u>

Integrity is the practice of keeping the information consistent, trustworthy, and accurate throughout its life cycle without any unauthorized parties accessing and changing it before it reaches its authorized party.

<u>Availability</u>

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Availability is the practice of keeping information readily available for authorized parties by maintaining the integrity of the hardware and systems used to keep that information ready at all times.

<u>What are the differences between Authentication & Authorization?</u>

Authentication is used by "a server when the server needs to know exactly who is using their site," while authorization is "a process by which a server determines if the client has permission to use a resource or access a file," (Boston University, 2025). An example of authentication would be when a user uses their username and password to access a server that way that server knows exactly who is using their site. An authorization example would look like when a person shows their boarding pass when boarding a flight. While authentication and authorization are normally grouped together when discussing cyber security, the difference between them is authentication is used for servers to determine if its clients are legitimate through identification while authorization is used to determine if its clients have permissions to access the resources within its server. Authorization is not used as often as authentication as there are limited sites that require permissions from people to access their resources.

<u>Conclusion</u>

The CIA triad works as a system of guidelines and policies that aim to inform and teach organizations the importance of protecting their data from being compromised or stolen from them. All three pillars: confidentiality, integrity, and availability, work together to simplify the security processing of moving and saving information in servers for its clients. While authorization and authentication have some differences that identify and protect their servers and clients, they work together to keep the internet safer and make sure that their clients are able to access their resources when they are needed.

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<u>Citations</u>

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