

## The CIA Triad

The CIA Triad is the core and most important model in cybersecurity. There are three pillars in the CIA Triad: confidentiality, integrity, and availability. These three pillars work together to safeguard digital assets and are used to show the effectiveness of security measures. Confidentiality is ensuring that sensitive information is accessed by people only authorized to view that information. For example, using encryption or login with a password. Integrity is maintaining accuracy and trustworthiness of data and information by preventing unauthorized modifications. For example, using digital signatures that show the information, or data hasn't been messed with. Availability guarantees that systems and information are available when needed by authorized personnel. For example, having backup generators for power outages or having enough computers for workers in a business to be able to access data needed for their work. There are two other vital pieces within the CIA triad model that play a role in helping maintain security Authentication and Authorization. Authentication is the process of verifying the identity of a user or a system. For example, user logins and passwords or company IDs, biometrics systems if available to that company to maintain better authentication practices. Authorization determines what authorized users can access different information and what a user is allowed to do on said system or device. For example, if a user is logged in to view their pay or medical information, they won't be able to view other users or coworkers' information. This shows that the CIA Triad is a vital security model for companies to use to ensure the best security practices are maintained within their companies. Authentication and authorization are intertwined within the CIA Triad to help the model work correctly to ensure a company or business has the best possible security for the users and company technology.

### References:

[What is the CIA Triad\\_ Definition, Explanation, Examples - TechTarget.pdf - Google Drive](#)