

## CIA Triad Write Up

The CIA triad is three of the most essential data security principles. They are Confidentiality, Integrity, and Availability. Following these three basic principles will ensure that the data of clients is in safe keeping. The CIA triad will help you to make security policies.

### Confidentiality, Authorization, and Authentication

Confidentiality is the act of keeping who can see data controlled by only allowing authorized individuals to see information. An example of this would be that one keeps their credit card number confidential. Should someone else have access to their credit card number, then they would be having a very unpleasant time. This principle extends to all forms of sensitive data that should be kept confidential. Examples of this include medical history, where one lives, and a social security number. A good way to ensure confidentiality would be to use authentication and authorization. Authorization is giving certain people privileges to access information. Authentication is the act of those people providing proof that they are an authorized individual. Acts of authentication could be passwords, two factor authentication, and biometric identification.

### Integrity

Integrity is the act of ensuring that data remains unchanged by any event. Events could be things like data loss due to a natural disaster or a malicious party that intends to alter data. To ensure integrity, one should make sure that backups are available to restore the data to its original state in case it is changed. Also, there should be alerts in place to notify you should data be changed.

### Availability

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Availability is making sure that downtime is minimized, and uptime is maximized. A client should be able to access their information whenever possible. If a client could not access their bank account for some time, the effects on their financial status could be devastating. Availability also means that servers should be up and running as quickly as possible should something happen to render those servers inaccessible. An example of an event that would make servers inaccessible would be a DDOS attack.

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Citations

Chai, Wesley. "What is the CIA Triad? Definition, Explanation, Examples." TechTarget, 28 June 2022.