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### What is the CIA Triad?

BLUF: This article will discuss the CIA triad and how it protects the personal information of a company or individual.

#### What is the CIA Triad?

The CIA triad is a concept that organizations use to manage and protect data. The earliest concept was discussed in 1976 during a U.S. Air Force Study and is used by companies to this day. CIA stands for Confidentiality, Integrity, and Availability. First, Confidentiality means protecting sensitive information from getting into the wrong hands and damaging the company or individuals. Integrity means keeping the data accurate and unaltered throughout its lifecycle and when used by the company. If confidentiality ever falls, Integrity will be used to ensure the data is not altered or changed by anyone but the company the data belongs too. Availability is next. Availability ensures that all authorized personnel have access to the data at any time, any place. It also involves maintaining hardware and infrastructure that holds protected data.

#### Authentication & Authorization

While Authentication and Authorization seem similar, they are very different. Authentication is the process of verifying a user's identity to access something. On the other hand, authorization determines what information a verified user can access within a given system. An example of authentication is entering your username and password. An example of authorization is how an admin may view a website differently than a basic user.

#### Conclusion

The CIA Triad was first recognized as a concept in 1976 during the U.S. Air Force Study. As old as it is, it's still used by many companies today. Confidentiality means protecting sensitive data. Integrity means maintaining accurate data. Availability means ensuring that anyone authorized to access it can access it at any time. Authentication is verifying the user's identity. Authorization is determining what that user can access. Knowing the CIA Triad is important because it protects our information and the company's. Knowing the difference between authentication and authorization is also important because both are foundational materials for cybersecurity.

## References

- <https://drive.google.com/file/d/1898r4pGpKHN6bmKcwIxDpVZpCC6Moy8I/view>
- <https://auth0.com/docs/get-started/identity-fundamentals/authentication-and-authorization>