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The Pillars of Information Security: Understanding the CIA Triad

The CIA triad refers to the three pillars of information security - confidentiality, integrity, and availability. Authentication verifies user identity, while Authorization determines what a user can access. In this write up, I describe the CIA Triad and the difference between Authorization and Authentication.

What is the CIA Triad?

The CIA Triad model encompasses the fundamental principles of information security, which include Confidentiality, Integrity, and Availability. These principles are crucial for securing systems and data in information security. According to Lake (2022), “Confidentiality is the property of restricting everyone from accessing systems or data except authorized users.”

Integrity refers to the reliability, precision, and credibility of data or information. Availability refers to the consistent and secure accessibility of data for individuals with authorized access.

The Differences between Authentication and Authorization

Both Authorization and Authentication are concepts in the CIA Triad. Authentication refers to the process of verifying the identity of a user or entity, like using an ID card to get into a military base. Authorization refers to permitting access to a system or data, like allowing someone to download a file or access specific systems. For example, users can establish their identity by logging in with their identification. But based on their Authorization level within the system, they can only access or modify specific files or data.

Conclusion

In Conclusion, as we discussed, the CIA Triad consists of three concepts: Confidentiality, Integrity, and availability. These concepts form a guide for developing policies in information security. I also discussed the difference between Authorization, permitted access, and Authentication, verifying user identity. These five concepts provide a framework to develop comprehensive security policies and controls.

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