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CIA Triad

The CIA triad (Confidentiality/Integrity/Availability) is a cyber security model used to harmoniously conform the three key aspects of information security. In the article Confidentiality is defined as “A set of rules that limits access to information” (Chai 1). Confidentiality is used to safeguard information so that it’s not accessed by unauthorized groups/personnel. In the modern world many groups use confidentiality on a day to day basis, ranging from health information in the clinical industry all the way to handling procedures used in the military so that foreign adversaries don’t get the upper hand. The author of this article defines Integrity as “The assurance that the information is trustworthy and accurate” (Chai 1). Integrity is a vital part of the triad, as it is a means of guaranteeing the safety of information, either in house or while it is being transmitted. Finally, Availability is defined as “A guarantee of reliable access to the information by authorized people” (Chai 1). This is the final key to a properly functioning security system as without availability the safeguarding of information would mean little because no one that the information pertains to could access it.

Authorization vs. Authentication

In my personal research of authorization vs. authentication I found an article written by an employee at IBM which defines Authorization as “Gives the user the right level of access to system resources” (Kosinski 1). Authorization helps compartmentalize security level access by divvying specific permissions to users. In an organization/business without authorization all

members would be able to access the same information and there would be no cutoff to what they could see. In the same article, the author defines Authentication as “verifies a user’s identity” (Kosinski 1). Authentication should be seen as a bouncer at a bar, he checks your ID and if all checks out, you are granted access into the building. Authentication and Authorization are both equally important but drastically different, where one lets you in the system (Authentication) the other dictates what you can do and where you can go (Authorization).

Conclusion

The CIA triad is a vital component to information security and when utilized as the framework of your organization/business you are bound for a successfully functioning security environment. Authentication can come in many forms and Authorization is an ever expanding permissions list depending on individual factors but when managed properly both become an integral part of the information security environment.

Works Cited

Kosinski, Matthew. “Authentication vs. Authorization: What’s the Difference?” *IBM*, 17 Nov. 2025, www.ibm.com/think/topics/authentication-vs-authorization.

Hashemi-Pour, Cameron, and Wesley Chai. “What Is the CIA Triad?: Definition from TechTarget.” *What Is the CIA Triad (Confidentiality, Integrity and Availability)?*, TechTarget, 21 Dec. 2023, www.techtarget.com/whatis/definition/Confidentiality-integrity-and-availability-CIA.