

Junhee Lee

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Professor Duvall

## **The CIA Triad and the difference between Authorization and Authentication**

### **BLUF:**

The CIA triad is a framework to guide an organization with regards to information and data security and is made up of confidentiality, integrity, and availability, arguably the three most important concepts in cybersecurity (Chai, 2022). The idea of authorization and authentication fall closely in line with confidentiality and help build upon the framework of the CIA triad.

### The CIA Triad, its Importance and Examples

Confidentiality, integrity, and availability are essential to the information security of an organization. Confidentiality is the principle that gives certain access only to particular users. In the military, not everybody has a Secret clearance or a need to access the Secret network, therefore they don't get a Secret drive or credentials, which is an example of confidentiality. This helps to preserve the integrity of the data, the second part of the CIA triad, by ensuring it is not changed by an unauthorized user. Integrity also relies on network hardware and system processes with examples such as backups, to ensure the data is intact (Chai, 2022). The final component of the CIA triad, availability, is another hardware focused aspect and ensures the data is available for use when needed. Integrity and availability both rely on data redundancy to function and ensure their performance as part of the CIA triad (Chai, 2022). The reason the CIA triad is essential to all organizations is that without adherence the organization will almost certainly have data and information systems issues that pose a great danger to the business itself.

### Authorization & Authentication and Examples

The principles of authorization and authentication are closely related to confidentiality and heavily influence integrity of the CIA triad. Authorization is essentially the same concept as confidentiality; it authorizes certain users access to certain information or systems (Kosinski, n.d.). Authentication is a process which verifies the user's identity when accessing a system (Kosinski, n.d.). Many authentication methods exist, but some commonly used methods are ID cards with a pin, passwords, or

biometrics. These methods authenticate the user and help protect the integrity of the systems.

**Conclusion:**

The CIA triad provides organizations with a framework for their data and information security. Authorization and authentication are vital components that fall under the CIA triad and help ensure that an organization runs effectively.

## References

- Chai, W. (2022). What is the CIA triad? Definition, explanation, examples. Retrieved from <https://www.techtarget.com/whatis/definition/Confidentiality-integrity-and-availability-CIA?jr=on>
- Kosinski, M. (n.d.) Authentication vs. authorization: What's the difference? Retrieved from <https://www.ibm.com/think/topics/authentication-vs-authorization>