

Twitney Addison
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CYSE 200T
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CIA

BLUF: The CIA triad confidentiality, integrity, and availability works as a connected framework that helps ensure information systems are secure, reliable, and accessible only to the right users.

The CIA triad is most effective when viewed as a unified system rather than three separate concepts. Confidentiality focuses on protecting sensitive information from unauthorized access through tools like encryption, two-factor authentication, and employee awareness of social engineering attacks. Integrity ensures that data remains accurate and unchanged, which is essential for maintaining trust in systems and preventing unauthorized modifications. Availability, on the other hand, ensures that authorized users can access information and systems when needed without unnecessary disruptions or downtime.

It is also important to understand the difference between authentication and authorization within this framework. Authentication answers the question "Who are you?" by verifying identity through methods like passwords or biometric scans. Authorization follows by determining "What are you allowed to do?" based on the user's permissions after their identity is confirmed.