Name: Chris Coleman

Date: January 26th, 2024

The Classified Framework

BLUF

The CIA Triad offers an extensive framework for comprehending and putting information security principles into practice, which is the main lesson to be learned from it. In every information system, the three elements of confidentiality, integrity, and availability serve as a guide for the design and evaluation of security measures.

Heading One

The CIA Triad is the framework for comprehending and putting security measures in place in information systems. It supports the complete evaluation and management of security risks by considering the requirement to safeguard data from unauthorized access, preserve data accuracy and dependability, and guarantee that information is accessible when needed. In the subject of information security, the CIA Triad's concepts are seen as vital for the creation of secure systems. This foundational information security concept represents three core principles in Confidentiality, Integrity, and Availability.

What Do These Principles Mean?

These three principles are particularly important because of how crucial they are to implementing secure information systems. Confidentiality in information security ensures that information is only accessible to those allowed. It involves the steps taken by an organization to guarantee the privacy or confidentiality of data. Simply, it is about preserving data access to prevent unwanted disclosure.

In order to do this, information access needs to be monitored and managed to stop unwanted access to data, whether it is done on purpose or by accident. Making sure that those lacking the correct authorization are prevented from obtaining assets that are vital to your company is a crucial part of maintaining confidentiality. When it comes to integrity, it guarantees the consistency, accuracy, and dependability of data. It involves preventing unauthorized parties from changing or tampering with data. This keeps the data in the proper format and protects it from unintentional changes, which helps to maintain its reliability. It establishes a framework for what you own and requires that organizations guarantee consistent, accurate, reliable, and secure data. Availability guarantees that resources and information are available to authorized users and can be used when needed. It involves protecting against as well as reducing interruptions to data and system availability. These CIA Triad principles are essential to information security and crucial to the development of secure security systems.

Authentication vs. Authorization

Authentication is verifying the identity of a person, system, or other entity trying to access a resource. It guarantees that a person is who they say they are. A prime example of this practice is our ODU (Old Dominion University) SSO sign in that we must verify to log into our Midas accounts. Authorization is the process of approving or rejecting access to resources or actions that comply with the rights and privileges of the verified organization or person. An example of this could be the authorization check after logging into our Midas, as the system checks determines our permissions. Although they have their differences, it is stated on the *Oracle NetSuite* site that Authorization follows Authentication. Just because you have been authenticated does not mean you will be granted access to every single feature.

Conclusion

Through the integration of these concepts into information system development and operation, organizations can establish a strong and comprehensive security stance. When creating policies, putting

security controls in place, and making decisions to guard against a variety of security risks and threats, the CIA Triad provides guidance. It highlights how crucial it is to consider availability, confidentiality, and integrity all at once to create a well-rounded and successful information security strategy. Authentication and authorization work together as essential parts of a strong security plan. By utilizing these ideas, information systems security can be achieved in a way that preserves the CIA Triad—Confidentiality, Integrity, and Availability.

References

Staff, C. (2023, November 29). *What is the CIA triad?* https://www.coursera.org/articles/cia-triad

Gupta, D. (n.d.). *Authentication vs. authorization: Know the differences*. loginradius.
    https://www.loginradius.com/blog/identity/authentication-vs-authorization-infographic/

Schwarz, L. (2022, April 28). *What is authorization? definition & examples*. Oracle NetSuite.
    https://www.netsuite.com/portal/resource/articles/erp/authorization.shtml

Chai, W. (2022, June 28). *What is the CIA triad_ definition, explanation, examples -*
    techtarget.pdf. Google Drive.
    https://drive.google.com/file/d/1898r4pGpKHN6bmKcwlxPdVZpCC6Moy8l/view