Name: Tamya Bruce

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The CIA Triad

The article about the CIA Triad was very interesting. It discussed what the CIA Triad was and the role it plays in information security. I believe that the CIA triad indeed does play a huge and important role and it is crucial to cybersecurity.

The CIA Triad stands for Confidentiality,Integrity and Availability and is known to be crucial to cybersecurity and information security. The CIA triad's main purpose is to help "guide policies for information security within an organization"(Chai, W.,2022). All three componets are important, they all benefit from each other.

Confidentiality

Confidentiality is known to keep users sensitive information protected and to help prevent sensitive information from being tampered with. Confidentiality can be compromised in so many ways and, some could be direct and some could be indirect. All violations of confidentiality attacks are not always intentional, human error can also play a huge part in risking confidentiality. Human error could be so simple as not logging off something important before moving on from a public computer or leaving out sensitive information written down in places. Good prevention methods include data encrption, two factor authentication and the act of creating strong passwords. It is also always good to make sure an organization is equipped with the knowledge to help them prevent and snoop out risks.

Integrity

Integrity is known to help maintain data accuracy, reliabilityand that it is trustworthy. Integrity mostly works with file permissiomns and things such as user access controls. It is important to make sure that no data is tampered with to ensure the safety of information and that users make sure they are using backup and recovery softwares for data . To help prevent compromising integrity you can use digital signatures, certficate authorities and checksums and make sure everyone is knowledgeable about how to prevent human error.

Availability

Availability is known to make sure that information is accessible,consistent and ready at all times for authorized users.This component is crucial because it makes it easier to maintain hardware and system upgrades and making sure thateverything is free of conflicts. Good prevenative methods would be using Raid or failover systems, and making sure you have data recovery in case there is any data loss.

Authentication Vs. Authorization

Authentication and Authorization is oftently mistakenly to be merged together as one, but the two terms are completely different from one another. Authentication questions whether a person is who they say they are and is commonly used to protect items of value and systems and data in the digital world. A good example of authentication systems could be as simple as a username and password and answering a few security questions. Authorization is known as a security process that helps figure out a user's level of access, who has the authority to gain the access to the desired data or program. It can be very hard sometimes to tell the difference

between the two but think of it as a person coming to your home and knocking on your door, you open the door and recognize who was knocking. That would be an example of authentication because you recognized who the person was. Authorization is like if that person would have just used a key and came in the door because they had higher authority to have access to open the door, instead that person would not have the authority to just come in and open the door based on their relationship(*Authentication vs. authorization:,2023*).

Conclusion

In conclusion, the Cia Triad is known to be crucial for cybersecurity. The CIA Triad consists of 3 different components, with each of its components all doing their best to protect data and sensitive information. I believe that all 3 components work together to help ensure that everything is running smoothly and risk free.

References

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