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▶ TALENTO TECH

REGIÓN 3
CAUCA - NARIÑO
LESSON 3 - UNIT 1



UTP
Universidad Tecnológica
de Pereira

faceIT

Lesson 3: CIA PRINCIPLES VIDEO:

https://www.youtube.com/watch?v=kPPFNrIN3zo&ab_channel=IBMTTechnology

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1) Reading

CIA PRINCIPLES

What are the CIA principles?

Imagine you have a secret diary. You want no one else to read it (confidentiality), no one to change it (integrity), and you want to be able to access it whenever you need (availability). These three concepts are the foundation of the CDI principles in cybersecurity.

- **Confidentiality:** Ensuring that information is accessible only to authorized individuals. It's like putting a password on your diary.





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- **Integrity:** Ensuring that information is accurate, complete, and has not been altered. It's like making sure no one has erased or changed anything in your diary.
- **Availability:** Ensuring that information is accessible when needed. It's like having your diary always at hand when you want to write in it.

How do the CIA principles work?

These principles are applied through various security measures, such as:

- **Encryption:** Coding information so that only those with the key can read it.
- **Authentication:** Verifying the identity of users to ensure that only authorized individuals can access information.
- **Access controls:** Limiting access to information based on the roles and permissions of each user.
- **Backups:** Creating copies of information to be able to recover it in case of loss or damage.
- **Intrusion detection:** Monitoring systems to detect any suspicious activity

Why are the CIA principles important?

- The CIA principles are the backbone of cybersecurity. By protecting the confidentiality, integrity, and availability of information, the following are prevented:
- Financial losses: The leakage of confidential information can cause significant financial losses.
- Damage to reputation: Security breaches can damage the reputation of a company or individual.
- Service disruptions: Loss of availability can cause disruptions in critical services.

Examples:

- Data leaks on social media and how confidentiality is violated.
- Ransomware attacks that compromise information availability