

CIA Triad Cheat Sheet

Confidentiality

Ensures that data is only accessible to authorized individuals. Focuses on privacy and access control.

Examples:

- Encryption (Data at rest/in transit)
- Role-Based Access Control (RBAC)
- Multi-Factor Authentication (MFA)
- VPN and Secure Channels
- Least Privilege Principle

Integrity

Guarantees the accuracy and trustworthiness of data throughout its lifecycle. Prevents unauthorized modifications.

Examples:

- Checksums and Hashing (e.g., SHA-256)
- Digital Signatures
- Version Control
- Audit Logs
- Immutable Backups

Availability

Ensures that data and systems are available when needed. Focuses on uptime, redundancy, and resilience.

Examples:

- Redundant Systems and Failover
- Load Balancing
- Disaster Recovery (DR)
- DDoS Protection
- Cloud Auto-Scaling