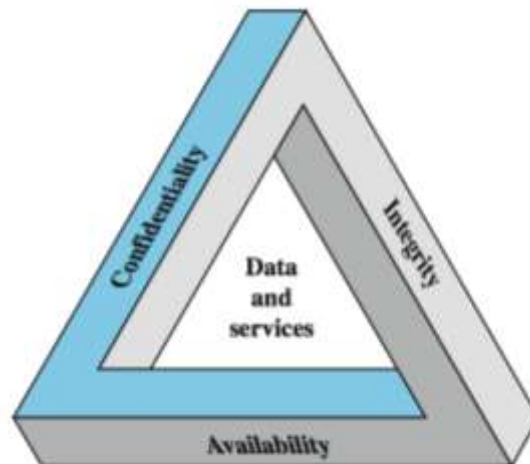## Key Security Concepts

The three key concepts form what is often referred to as the CIA triad. These three concepts embody the fundamental security objectives for both data and for information and computing services.

- ✓ **Confidentiality**: Confidentiality is preserving authorized restrictions on information access and disclosure, including means for protecting personal privacy and proprietary information. A loss of confidentiality is the unauthorized disclosure of information.
- ✓ **Integrity:** Integrity indicates guarding against improper information modification or destruction, and includes ensuring information non-repudiation and authenticity. A loss of integrity is the unauthorized modification or destruction of information.
- ✓ **Availability:** Ensuring timely and reliable access to and use of information. A loss of availability is the disruption of access to or use of information or an information system.

Although the use of the CIA triad to define security objectives is well established, some in the security field feel that additional concepts are needed to present a complete picture. Two of the most commonly mentioned are:

- • **Authenticity:** The property of being genuine and being able to be verified and trusted; confidence in the validity of a transmission, a message, or message originator.
- • **Accountability:** The security goal that generates the requirement for actions of an entity to be traced uniquely to that entity.