

Definition:

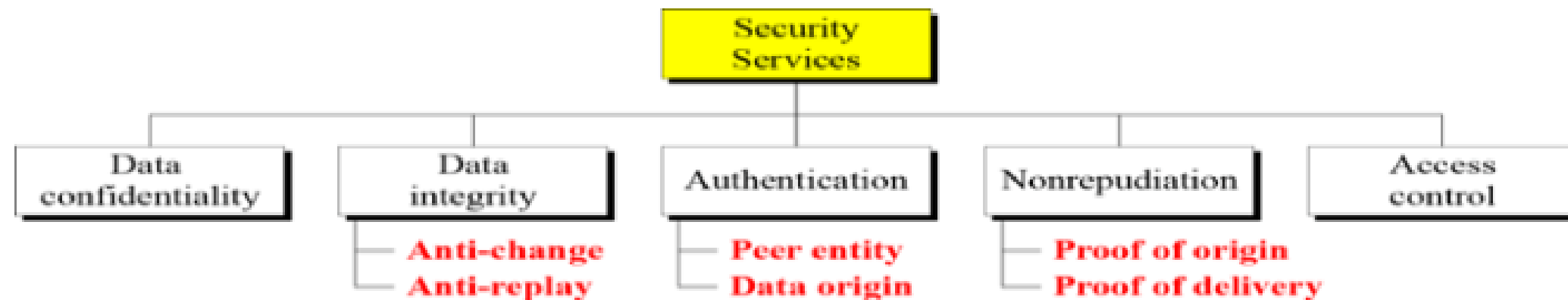
X.800 defines a security service as a service that is provided by a protocol layer of communicating open systems and that ensures adequate security of the systems or of data transfers.

Perhaps a clearer definition is found in RFC 4949, which provides the following definition: a processing or communication service that is provided by a system to give a specific kind of protection to system resources

To Remember:

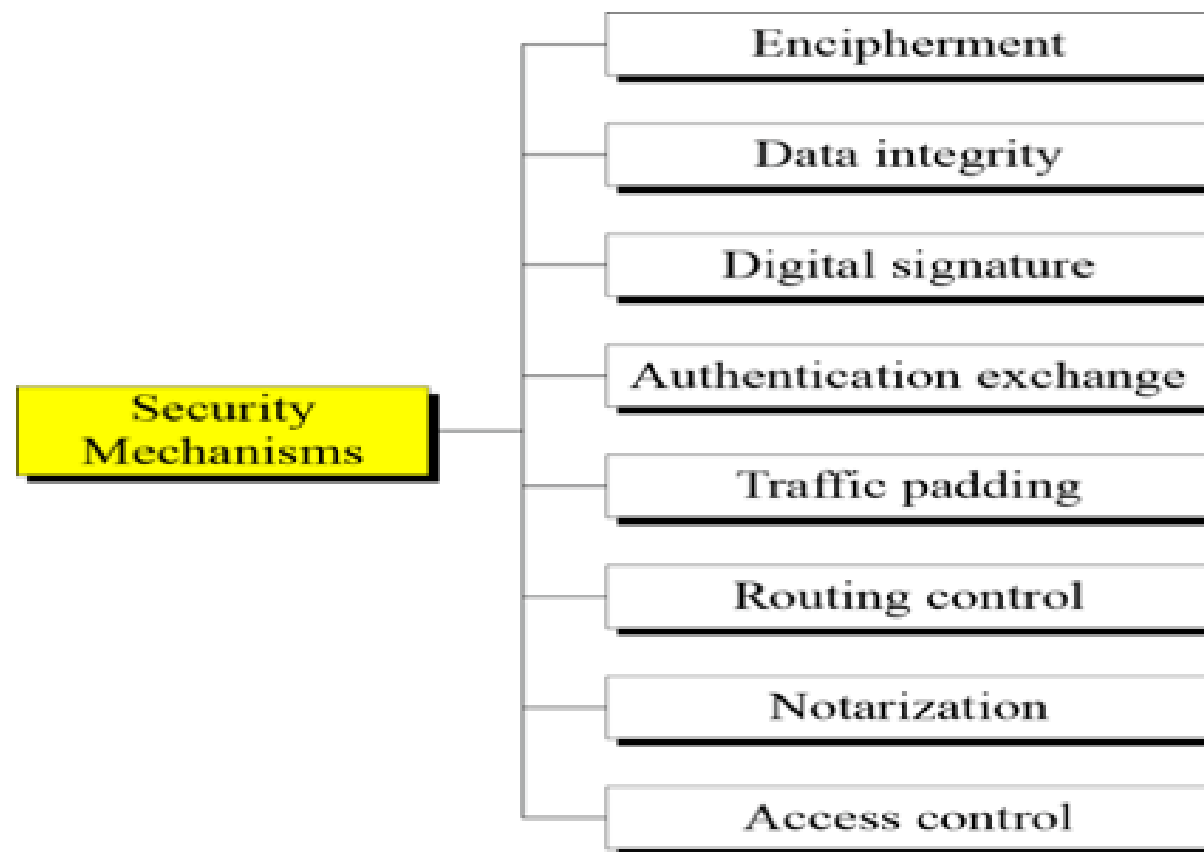
Security Services implement security policies and are implemented by security mechanisms.

Security services



- **Authentication:** assures recipient that the **message is from the source** that it **claims to** be from.
- **Access Control:** controls who can have **access to resource** under what **condition**
- **Availability:** available to authorized entities for *24/7*.
- **Confidentiality:** information is not made available to unauthorized individual
- **Integrity:** assurance that the message is unaltered
- **Non-Repudiation:** protection against denial of sending or receiving in the communication

Security Mechanisms



Relation between security services and mechanisms

<i>Security Service</i>	<i>Security Mechanism</i>
Data confidentiality	Encipherment and routing control
Data integrity	Encipherment, digital signature, data integrity
Authentication	Encipherment, digital signature, authentication exchanges
Nonrepudiation	Digital signature, data integrity, and notarization
Access control	Access control mechanism