

# Chapter 4: Secure Data Management

## → Physical Security of Devices

- Security is not just electronic
- physical protection is equally important

### • Physical Security ways:

- Log Equipment
- Cable Locks (computer lock)
- Access Control (Security cards, biometric scanners)

## → Backup Procedure

### • Why backup is critical

- Computer crash
- hard disk Failure
- natural disasters
- Electrical problems
- human error

### • Backup Scheduling Recommendation

- Frequently (at least once a week)
- Critical data / financial records : daily backup
- Store backup devices in different location (off-site)

### • Incremental Backup:

- only files modified since last full backup

## → Backup Methods

### 1) Backup to a Device

- Tape drives
- external hard disk
- USB drives
- Backup device should be off-site

• For both short/long term use

### 2) Remote Backup (Cloud)

- Automatically collects, compresses, encrypts data
- Transfers data to remote backup service provider's servers

## → Secure Destruction

### Deleting ≠ Permanent Removal

- files moved to recycle bin first
- even "permanently deleted" files can be retrieved with special software

### → Methods:

- 1) Shredding (physical destruction)
- 2) Drive/Media Destruction (physical destruction of a drive)
- 3) Degaussing (remove magnetic field from a device)
- 4) Data Destruction Utilities: Software that can destruct data on a disk without harming it (Disk Scrubber)