

## Physical Security Controls



- A set of security measures taken to **prevent unauthorized access** to physical devices

### Examples of Physical Access Controls



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## Physical Security



- Physical security is the **first layer of protection** in any organization
- It involves the **protection of organizational assets** from environmental and man-made threats



### Why Physical Security?

- To prevent any **unauthorized access** to the system's resources
- To prevent the **tampering or stealing of data** from the computer systems
- To safeguard against **espionage**, sabotage, damage, and theft
- To protect personnel and prevent **social engineering attacks**

### Physical Security Threats

- Environmental threats
  - Floods and earthquakes
  - Fire
  - Dust
- Man made threats
  - Terrorism
  - Wars
  - Explosion
  - Dumpster diving and theft
  - Vandalism



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## Types of Physical Security Controls



<b>Preventive Controls</b>	<ul style="list-style-type: none"> <li>Prevent <b>security violations</b> and enforce various access control mechanisms</li> <li>Examples include door lock, security guard, and other measures</li> </ul>
<b>Detective Controls</b>	<ul style="list-style-type: none"> <li>Detect security violations and <b>record any intrusion attempts</b></li> <li>Examples include motion detectors, alarm systems and sensors, video surveillance, and other methods</li> </ul>
<b>Deterrent Controls</b>	<ul style="list-style-type: none"> <li>Used to discourage attackers and <b>send warning messages</b> to the attackers to discourage intrusion attempts</li> <li>Examples include various types of warning signs</li> </ul>
<b>Recovery Controls</b>	<ul style="list-style-type: none"> <li>Used to recover from security violation and <b>restore information and systems</b> to a persistent state</li> <li>Examples include disaster recovery, business continuity plans, backup systems, and other processes</li> </ul>
<b>Compensating Controls</b>	<ul style="list-style-type: none"> <li>Used as an alternative control when the <b>intended controls failed</b> or cannot be used</li> <li>Examples include hot sites, backup power systems, and other means</li> </ul>

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## Physical Security Controls



<b>Premises and company surroundings</b>	Fences, gates, walls, guards, alarms, CCTV cameras, intruder systems, panic buttons, burglar alarms, windows and door locks, deadlocks, and other methods
<b>Reception area</b>	Lock up important files and documents Lock equipment when not in use
<b>Server and workstation area</b>	Lock the systems when not in use, disable or avoid having removable media and DVD-ROM drives, CCTV cameras, and workstation layout design
<b>Other equipment such as fax, modem, and removable media</b>	Lock fax machines when not in use, file received faxes properly, disable modems' auto answer mode, do not place removable media in public places, and physically destroy corrupted removable media
<b>Access control</b>	Separate work areas, implement biometric access controls (fingerprinting, retinal scanning, iris scanning, vein structure recognition, facial recognition, voice recognition), entry cards, man traps, faculty sign-in procedures, identification badges, and other means
<b>Computer equipment maintenance</b>	Appoint a person to look after computer equipment maintenance
<b>Wiretapping</b>	Routinely inspect all wires carrying data, protect the wires using shielded cables, and never leave any wires exposed
<b>Environmental control</b>	Humidity and air conditioning, HVAC, fire suppression, EMI shielding, and hot and cold aisles

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