

Confidentiality

Objectives

- Understand what Confidentiality is
- Discuss how confidentiality is the most sought after principle
- Discuss, through example, how it is applied

FIPS 199

- U.S. federal government special publication that outlines the standards for security categorization of Federal Information and Information Systems
- Breaks down categorization of information
- Based off FISMA compliance – Federal Information Security Modernization Act

Definition

- Definition according to Title 44 of the U.S. Code: “Preserving authorized restrictions on information access and disclosure, including means for protecting personal privacy and proprietary information”
- In layman's terms: Keeping things that are meant to be secret, secret
- This includes unauthorized access to people, systems and processes

How this applies?

- How do we use this term?
- Each time we discuss any IT service or system and assess security, we must look at each of the 3 principles
- FIPS 199: “A loss of confidentiality is the unauthorized disclosure of information”

Example – Credit Card Information

- To help illustrate this over the next few lessons, we'll use the example of credit cards
- Credit card companies go to great lengths to protect information
- What if someone steals your credit card information?
- Is credit card information confidential?

Example – Health Care Information

- Health information is another example of something that needs to be confidential
- Do you want your personal information leaked?
- In the US we have the Health Insurance Portability and Accountability Act

Best principle to follow?

- Out of the three principles – Confidentiality, Integrity, Availability, this is the one people are most familiar with and most sought after
- Laws are based on it
- Industry is designed to keep information secret
 - Intellectual Property (IP)
 - Financial Information
 - Government Secrets
 - Student Data

Examples of how we use it everyday

- Credit Cards
- Website Encryption – your Coursera login, Email, Google.com, Youtube
- VPNs – Virtual Private Networks
- Encryption such as BitLocker or FileVault

Why do we need this?

- It protects us from people intentionally or accidentally
- Only authorized individuals should have access to it

Major failures

- You name the latest breach – they are everywhere.
- Target
- Home Depot
- Heartland
- And it goes on...