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Week 10 Assignment

Using APA format, give short answers to the following:

1. What are the advantages and disadvantages of standardization in computer hardware and systems software?

Standardization tends to stifle innovation and to produce solutions that are suboptimal for some users; however, standardization results in reduced costs and simplified service as well.

2. Describe authentication and authorization. Which depends on the other? How and why are these processes more complex in a modern networked organization than within an organization that supports all information processing with a single mainframe?

Authentication is the process of determining or verifying the identity of a user or process owner. Authorization is the process of determining whether a user has sufficient rights to access a particular resource. Authorization depends on authentication, as an individual must be authenticated by the system before it is possible to determine their authorized privileges.

These processes are more complex in modern networked organizations because user accounts and authorizations need to be maintained on multiple servers. Instead, modern operating systems cooperate with each other, interacting with a directory or security service, to perform authentication across systems.

3. What password protection measures are normally implemented by system administrators, operating systems, and security services?

Password protections include restrictions on the length and composition of valid passwords, requirements that passwords be periodically changed, analysis of password content to identify passwords that are easily guessed, and encryption of passwords in files and during transmissions over a network

4. Describe the pros and cons of enabling audits of resource accesses.

Auditing allows for examining records of user activities and resources to determine whether a security policy has been correctly implemented or whether resources or the system have been compromised. Unfortunately, auditing is a backwards-looking strategy, an a poor method for preventing security breaches before they occur. Auditing also results in large log files, reduces system performance, and automated tools to extract information from large auditing logs.

5. What is a virus? How can users and system administrators prevent virus infections?

A virus is a program or program fragment that infects a computer by permanently installing itself, and performance malicious acts on the infected computer, such as replicating itself using system resources. Users and system administrators can prevent virus infections by installing and enabling antiviral software and ensuring that it is regularly updated.