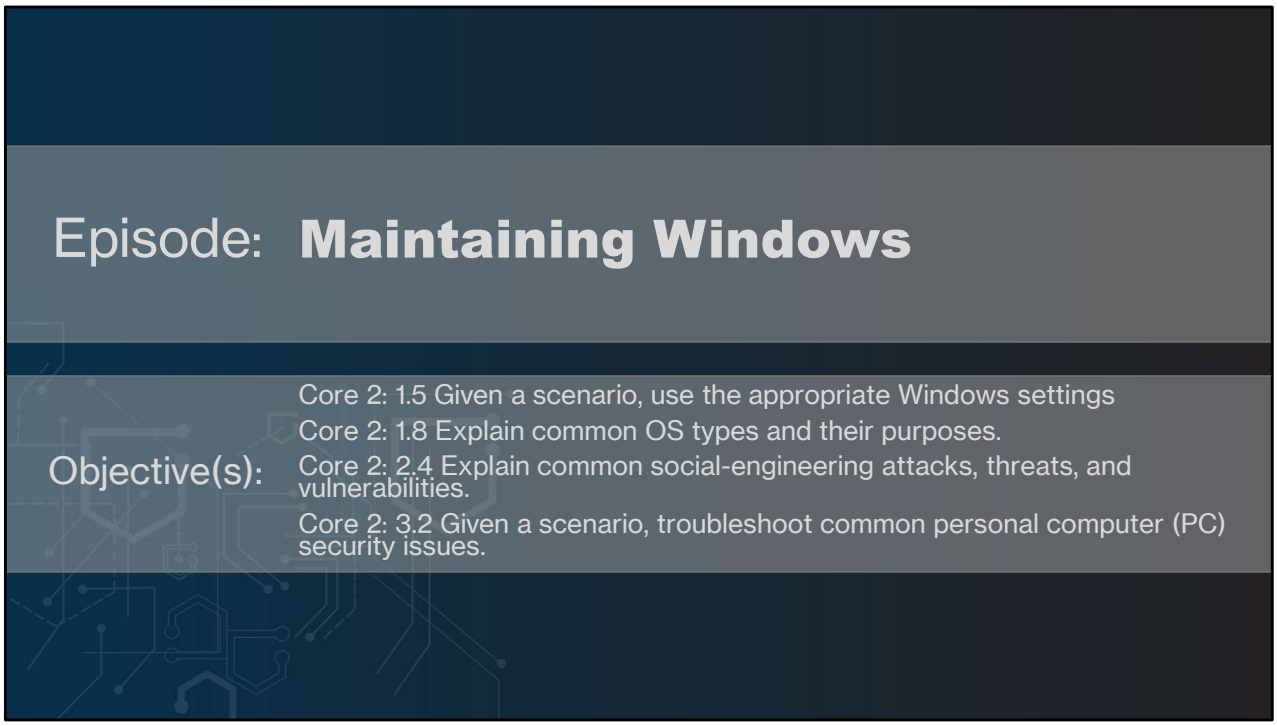
Maintaining and Optimizing Operating Systems

Chapter 14

CompTIA A+ (220-110x)

Mike Meyers and Steve Nicholson


Episode: Maintaining Windows
Objective(s):
Core 2: 1.5 Given a scenario, use the appropriate Windows settings
Core 2: 1.8 Explain common OS types and their purposes.
Core 2: 2.4 Explain common social-engineering attacks, threats, and vulnerabilities.
Core 2: 3.2 Given a scenario, troubleshoot common personal computer (PC) security issues.

Episode Description

Software updates are crucial to maintaining a healthy system. An unpatched system can spell disaster to a network. Although Windows has made their update process relatively hands-free, there are still some things to take note of.

Key Terms

- 0:14 - Objective term - Unpatched system
- 0:29 - Patch management
- 1:15 - Objective term - Windows Update
- 1:45 - Delivery Optimization
- 2:18 - Objective term - OS update failure
- 2:46 - Objective term - End-of-life (EOL)

Quick Review

- Microsoft, Apple, and the various Linux developers update operating systems regularly
- Proactive patch management is a crucial aspect of maintaining a healthy system
- You can manage your Windows 10 and 11 updates in the Updates & Security section within the Control Panel
- Operating systems that have reached their end-of-life (EOL) are typically not eligible to receive feature and security updates

Episode: **Maintaining macOS**

Objective(s): Core 2: 1.10 Identify common features and tools of the macOS/desktop OS.

Episode Description

In this episode, Steve enlists the help of Michael "Mac Maniac" Smyer, who walks us through how easy it is to maintain the macOS and its applications. Mike also discusses how to customize login items and the different types of application files.

Key Terms

- 0:32 - Objective term - System Preferences
- 0:55 - Objective term - App Store
- 1:13 - CMD + R
- 1:53 - Objective term - Installation and uninstallation of applications
- 2:39 - Objective term - .dmg
- 2:58 - Objective term - Application Bundle (.app)

Key Terms

- 3:10 - Alias
- 3:42 - ARM Architecture
- 4:49 - Objective term - Package Installer (.pkg)
- 5:31 - Login Items
- 11:43 - Objective term - Force Quit

Quick Review

- Software Update can automate updating the macOS
- Updating individual applications is done through the App Store
- Installing applications is done via the App Store or downloading .dmg, .pkg, .app installation files
- Login Items control what programs start when you log into a mac

Episode: **Maintaining Linux**

Objective(s): Core 2: 1.11 Identify common features and tools of the Linux client/desktop OS.

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Episode Description

While Windows is a one-size-fits-all product, Linux is quite different. The whole concept behind Linux is an almost total control over the environment. However, this control brings with it a massive amount of responsibility for patch and application management of the OS.

Key Terms

- Objective term - Updates/patches
- Objective term - Terminal

Quick Review

- Linux can be updated via the GUI or CLI
- Most distros of Linux utilize rolling repos that you can connect to and download the latest updates


Episode: Working with Applications
Objective(s):
Core 2: 1.7 Given a scenario, apply application installation and configuration concepts.
Core 2: 2.5 Given a scenario, manage and configure basic security settings in the Microsoft Windows OS.
Core 2: 3.1 Given a scenario, troubleshoot common Windows OS problems.

Episode Description

It's important to consider hardware requirements and impact to your device, network, and operation before installing any applications. This episode covers these requirements, as well as some tips for using and troubleshooting applications.

Key Terms

- 0:40 - Alt + Tab
- 1:00 - Virtual desktops
- 1:08 - Windows + Tab
- 1:25 - Snapping
- 2:28 - Objective term - Run as administrator
- 2:41 - Objective term - User Account Control (UAC)

Key Terms

- 3:50 - Objective term - Troubleshoot applications by uninstalling and reinstalling
- 5:33 - Objective term - 32-bit vs. 64-bit application requirements
- 5:53 - Objective term - Dedicated graphics card vs. integrated
- 6:22 - Objective term - System RAM and Video RAM (VRAM) requirements

Key Terms

- 6:45 - Objective term - CPU requirements
- 7:01 - Objective term - Hard drive/storage requirements
- 7:25 - Objective term - Impact to device
- 7:40 - Objective term - Impact to network
- 8:08 - Objective term - Impact to operation and business

Quick Review

- You can use different hotkey combinations in Windows to manage multiple applications at once
- Knowing how to troubleshoot applications is key to being a good tech
- It's important to consider hardware requirements and impact to your device, network, and operation before installing any applications

Episode: **Backing Up Your Data in Windows**

Objective(s):

Core 2: 1.9 Given a scenario, perform OS installations and upgrades in a diverse OS environment.

Core 2: 4.3 Given a scenario, implement workstation backup and recovery methods.

Episode Description

Windows has provided many different tools over the years to enable techs (and users) to back up important files. A good tech knows these Windows tools to help their users recover data when things go wrong.

Key Terms

- 1:03 - Objective term - Full backup
- 2:26 - Objective term - Differential backup
- 4:27 - Objective term - Incremental backup
- 5:16 - First in first out (FIFO)
- 5:29 - Objective term - Grandfather-father-son (GFS)
- 5:38 - Objective term - 3-2-1 backup rule
- 6:30 - Objective term - On-site vs. off-site backups

Quick Review

- Backups are imperative to safeguarding your system and data
- You can do full backups or only backup the files that have changed since the last backup
- Testing your backup process frequently helps iron out any issues
- When in doubt, follow the 3-2-1 method for backing up your data

Episode: **Backing Up Your Data in Linux and macOS**

Objective(s):

Core 1: 5.1 Given a scenario, apply the best practice methodology to resolve problems.

Core 2: 1.9 Given a scenario, perform OS installations and upgrades in a diverse OS environment.

Core 2: 1.10 Identify common features and tools of the macOS/desktop OS.

Core 2: 1.11 Identify common features and tools of the Linux client/desktop OS.

Core 2: 4.3 Given a scenario, implement workstation backup and recovery methods.

Episode Description

Backing up data in Linux and macOS follows the same best practices as Windows, with a few different tools.

Key Terms

- 1:38 - Objective term - Time Machine
- Objective term - Grandfather-father-son (GFS)
- 1:12 - Objective term - Set backups to run automatically as a best practice
- 3:19 - Objective term - Perform backups before making changes

Quick Review

- There are many ways to backup your data in Linux via the GUI or CLI
- Time Machine automates backups within MacOS
- Remember to perform the necessary backups prior to making any system changes