



Lesson Plans

Configuring Windows Vista

(Exam 70-620)

Version 2.0

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Course Overview

This course prepares students for the Vista certification exam (70-620) by Microsoft. It focuses on how to install, configure, implement, manage and troubleshoot the Vista environment.

Module 1 – Installation

This module discusses different aspects of installation of Vista. This includes selecting the correct version of Vista, assessing a computer's ability to run Vista, installing Vista, upgrading to Vista, migrating settings from an existing Windows installation to Vista, and how to troubleshoot installation issues. Students will learn how to manage device drivers during and after installation. They will also learn how to join a computer to a domain to allow for central administration of security settings and other administrative tasks.

Module 2 – Configuration

In this module students will learn how to configure Windows Vista components. Windows Aero features can be configured to display, locate, and organize information. Parental Controls can be configured to control media access of minors and are only available on Home Basic, Home Premium, or Ultimate editions. Students will learn how to configure non-security related Internet Explorer features and to configure Windows Vista access settings for users who have visual, hearing, physical, or cognitive disabilities.

Module 3 – Security

This section covers several elements of Vista security. Windows Security Center is used to view and modify security related settings on the computer. User Account Controls prompt for permission before allowing changes that could affect security or performance. Students will learn how to configure Internet Explorer security features to manage security and privacy when attached to the Internet. They will also learn how Windows Defender is used to protect against spyware and Malware, and how Windows Firewall is used to protect against hackers, viruses, and worms.

Module 4 – Networking

In Module 4 students will learn the fundamentals of networking in a Vista environment. The basics of TCP/IP and DNS are reviewed and students are taught how to configure a network connection. The students are also taught how the Network and Sharing Center is used to configure and manage networking services. They will learn how to implement a wireless network and how to configure remote services. They will become familiar with common networking problems and solutions, and network troubleshooting tools.

Module 5 – Applications

Module 5 teaches the students how to use applications included in Vista: Media Player, Media Center, Windows Mail, Windows Meeting space, Windows Calendar, and

Windows Fax and Scan. It also teaches how to use the Windows Sidebar to display information for quick and easy access.

Module 6 – Management and Optimization

Module 6 discusses tools used to manage and optimize the Vista environment. Performance tools and diagnostic tools used to investigate network problems are presented. Students will learn how to customize Windows Update to set up a schedule when software updates are downloaded and installed. They will learn methods to protect data using the Encrypting File System (EFS) and BitLocker Drive Encryption. USB ReadyBoost can be used to increase system performance by using space on a flash device for fast cache access. Two file sharing methods, Public Folder Sharing and NTFS File Sharing, can be used to manage files across a network. Students will learn about backup and restore tools used to protect system and user files.

Module 7 – Mobile Computing

In Module 7 students will learn the tools to configure mobile devices, how to configure Tablet PC software, and how to conserve the power consumption of mobile devices.

Section 1.1: Vista Features and Versions

Preparation

The video outlines the features available with Vista and the versions in which they reside. Students will learn how to work within the new Vista interface.

Vista Objectives

- 101. Identify hardware requirements.
- 103. Upgrade to Windows Vista from previous versions of Windows.

Lecture Focus Questions:

- What are the main differences between the Vista Home Basic, Home Premium, and Ultimate editions?
- Which Vista editions include Windows Media Center?
- Which editions of Vista would you choose if you needed Remote Desktop?
- What three security-related features are included in every Vista edition?
- What is the difference between the Sidebar and the Start Menu?

Time

About 20 minutes

Section 1.2: Hardware Requirements

Preparation

In this section students will become familiar with the hardware requirements for the Windows Vista operating system. Free Microsoft tools that will help assess a computer's readiness to be upgraded to Windows Vista are discussed: Windows Vista Upgrade Advisor 1.0, Hardware Assessment Tool, and Application Compatibility toolkit. Students will learn how to install and run the Windows Vista Upgrade Advisor to assess a computer's ability to run Vista.

Vista Objectives

- 101. Identify hardware requirements.
- 103. Upgrade to Windows Vista from previous versions of Windows.

Lecture Focus Questions:

- What is the minimum requirement for hard disk space to install Vista?
What is the recommended minimum RAM?
- What are the video card requirements for a premium ready computer?
- You have a Windows 2000 Professional computer on which you would like to install Vista. What tools are available to check the hardware readiness of the computer?

Time

About 15 minutes

Section 1.3: Installation

Preparation

In this section students will become familiar with three basic methods to install Windows Vista: clean install, upgrade, and migration. Various Vista installation tools are presented. Vista can be installed from DVD, from a network, or by using Windows Deployment Services (WDS) to create an XML answer file. Students will learn the procedure to complete a clean installation.

Vista Objectives

- 102. Perform a clean installation.

Lecture Focus Questions:

- You have a Windows 2000 Professional system on which you would like to install Vista. Which installation types could you use (i.e. clean install, upgrade, migration)?
- How does a migration differ from a clean installation or an upgrade?
- What are the hard disk and partition requirements for creating a dual boot system with Vista?
- When configuring a dual boot computer with both Windows XP and Windows Vista, which operating system should you install first (and why)?
- What is Windows PE and how can it be used for installation?

Time

About 25 minutes

Section 1.4: Upgrade

Preparation

In this section the students will learn how to upgrade to Vista from previous versions of Windows. Only a 32-bit version of Windows XP service pack 2 or another version of Vista can be upgraded to Vista. The students will learn the steps to upgrade from an XP operating system to Vista and how to upgrade from one version of Vista to a different version of Vista.

Vista Objectives

- 103. Upgrade to Windows Vista from previous versions of Windows.

Lecture Focus Questions:

- You have a Windows XP Professional computer. Which versions of Vista support an upgrade path from your current system?
- You have a computer with Windows Vista Home Premium edition installed. You would like the system to run the Home Basic edition. How would you make the change?
- What are the things you should do prior to running the setup program to upgrade to Vista?
- How does Windows Anytime Upgrade simplify the process of upgrading Vista to a different edition?

Time

About 15 minutes

Section 1.5: Migration

Preparation

This section discusses the use of migration tools which will preserve personal settings and files when upgrading to Windows Vista. Students will learn how to use the User State Migration Tool (USMT) to migrate settings from an existing Windows installation to Vista.

Vista Objectives

- 103. Upgrade to Windows Vista from previous versions of Windows.

Lecture Focus Questions:

- How can you perform a migration if you don't have an Easy Transfer Cable?
- What are the three options for where to save user data during a migration?
- What types of information are moved during a migration? Why aren't installed applications moved during a migration?

Time

About 10 minutes

Section 1.6: Device Drivers

Preparation

This section discusses installing and configuring device drivers to enable interaction between a computer's operating system and hardware. A Microsoft digital signature specifies that the driver has been tested and should operate with Microsoft operating systems. Guidelines for installing new hardware following a Vista installation are presented. Students will learn how to install Plug and Play and legacy devices. They will also learn how to manage devices and drivers using Device Manager.

Vista Objectives

- 105. Install and configure Windows Vista drivers.

Lecture Focus Questions:

- How does Device Manager indicate a disabled device? A device with a driver issue?
- What should you do if Windows cannot automatically find a newer driver for your hardware?
- How does the order of installing USB devices differ from the order of installing other devices?
- What additional driver requirements are enforced for the 64-bit version of Vista?
- What conditions must exist for Last Known Good to be useful in recovering from system instability?

Time

About 30 minutes

Lab/Activity

- Manage Drivers
- Enable and Disable Devices

Section 1.7: Installation Troubleshooting

Preparation

This section teaches the students how to troubleshoot Vista installation issues during installation and after installation. Post installations settings may include the need to troubleshoot display problems and application compatibility issues. Students will learn how to use Device Manager, Event Viewer, and Startup and Repair Tool to troubleshoot installation issues.

Vista Objectives

- 104. Troubleshoot Windows Vista installation issues.
- 201. Troubleshoot post-installation configuration issues.

Lecture Focus Questions:

- What information does the Windows Experience Index tell you? How might this help identify post-installation issues?
- How do you start the Startup Repair tool?
- What tools do you have to help resolve application compatibility problems?

Time

About 15 minutes

Section 1.8: Domain Networking

Preparation

This section provides an overview of the basic concepts of domain networking. A domain is a logical grouping of computers that allows for central administration of security settings and other administrative tasks. A Vista computer can be joined to a domain if it is running Vista Business, Enterprise, or Ultimate. Students will learn how to join a computer to a domain.

Lecture Focus Questions:

- Which Vista editions support joining a domain?
- What happens to the Parental Controls feature when you join a computer to a domain?
- How are security and other system settings controlled in a domain computer (compared to a non-domain member)?

Time

About 6 minutes

Section 2.1: Windows Aero

Preparation

In this section students will learn about Windows Aero features that are used to view, find, and organize information. The availability of the Aero features depends upon the hardware and the version of Vista used. There are four versions of the Aero interface: Classic, Basic, Standard, and Full. Students will learn how to view and update the Windows Experience Index score.

Vista Objectives

- 202. Configure and troubleshoot Windows Aero.

Lecture Focus Questions:

- What are the system requirements for being able to display the full Aero experience?
- What is the minimum base score required for full Aero support?

Time

About 25 minutes

Lab/Activity

- Update the Performance Score

Section 2.2: Parental Controls

Preparation

Students will learn how to configure Parental Controls to protect children from offensive and unsafe Internet content. They will learn what features can be implemented through Parental Controls.

Vista Objectives

- 203. Configure and troubleshoot Parental Controls.

Lecture Focus Questions:

- What happens to Parental Controls when you connect to a domain?
- How can you block Internet access if the computer is not using Internet Explorer as the browser?
- You have configured Parental Controls to allow access to a computer between 6 pm and 8 pm. What happens to a currently logged on user after 8 pm?
- What age recommendations do games with a T rating have?

Time

About 30 minutes

Lab/Activity

- Configure Parental Controls
- Configure User Account Restrictions

Section 2.3: Internet Explorer

Preparation

This section examines configuring new non-security related Internet Explorer 7 (IE7) features. Students will learn how to use Internet Explorer features such as subscribing to feeds, Quick Tabs, page zoom, and advanced printing options.

Vista Objectives

- 204. Configure Windows Internet Explorer.

Lecture Focus Questions:

- What is a *feed* and how does using one keep you up-to-date on important information?
- What function is provided by IDN support in Internet Explorer?
- What setting should you configure to make Google your default Internet search tool?
- How does a tab group simplify working with commonly-used Web sites?

Time

About 25 minutes

Lab/Activity

- Configure Advanced Internet Options

Section 2.4: Accessibility

Preparation

In this section students will learn about configuring Windows Vista access settings to make it easier for those with disabilities to use computers. The Ease of Access component in the Control Panel is used to configure accessibility options for specific disabilities.

Lecture Focus Questions:

- Which accessibility tools would help someone who has trouble seeing images on the screen?
- What is the difference between Sticky Keys and Filter Keys?
- Which option would you configure if you wanted a sound to play when the Caps Lock, Num Lock, and Scroll Lock keys are used?

Time

About 5 minutes

Section 3.1: Windows Security Center

Preparation

This section discusses using Windows Security Center to view and modify the status of security related settings on the computer in four categories: Firewall, automatic updating, malware protection, and other security settings. Students will learn how to view the status of networking components and to enable and disable networking services using the Security Center.

Vista Objectives

- 301. Configure and troubleshoot User Account Control.
- 302. Configure Windows Defender.
- 304. Configure security settings in Windows Firewall.

Time

About 5 minutes

Section 3.2: User Account Control (UAC)

Preparation

In this section students will learn how to configure User Account Control (UAC) to monitor and manage unwanted actions or unintended software installations. Two account types are used by the User Account Control to determine what changes a user can perform: standard user account and Administrator account. Students will learn how to edit the Local Security Policies to customize UAC behavior.

Vista Objectives

- 301. Configure and troubleshoot User Account Control.

Lecture Focus Questions:

- How do access tokens and Admin Approval Mode work?
- What is the difference between prompting for *credentials* and prompting for *consent*? When does each prompt show?
- What is the secure desktop and how does it increase the security of Windows Vista?
- What is the difference between a message with a yellow background and one with a grey background?
- What affect does disabling the **Run all administrators in Admin Approval Mode** policy have on standard users?

Time

About 40 minutes

Lab/Activity

- Configure UAC Settings

Section 3.3: Internet Explorer Security

Preparation

This section examines security features of Internet Explorer. Students will learn how to manage add-ons for users, enable the Phishing Filter, and configure cookie handling. They will also learn how to add sites to security zones and modify security zone settings.

Vista Objectives

- 303. Configure Dynamic Security for Internet Explorer 7.

Lecture Focus Questions:

- You have just used a kiosk at a conference to read your e-mail and check your airline reservations online. What action should you take before walking away from the computer?
- How do the different privacy settings for cookies affect Web browsing?
- How can you install an add-on for one user while removing it for a different user?
- What is the difference between a ratings *bureau* and a rating *system*?
- How does Protected Mode protect your computer?

Time

About 70 minutes

Lab/Activity

- Delete the Browser History
- Manage Add-ons
- Configure Advanced Security Settings
- Modify Zone Memberships
- Configure Privacy Settings
- Enable the Phishing Filter

Section 3.4: Windows Defender

Preparation

This section discusses using Windows Defender to identify and protect against security threats caused by spyware and Malware. Students will learn how to enable Windows Defender and configure scan settings to manage quarantined and allowed software.

Vista Objectives

- 302. Configure Windows Defender.

Lecture Focus Questions:

- What is a real-time agent and how is it used in Windows Defender?
- How can you allow a quarantined item to run on your computer?
- What benefits does the SpyNet Community provide to help protect your computer?
- How do you keep Defender definition files up-to-date?

Time

About 35 minutes

Lab/Activity

- Configure Scan Times
- Enable Real-time Protection

Section 3.5: Windows Firewall

Preparation

This section examines the basics of using Windows Firewall to protect against unwanted access such as hackers, viruses, and worms. Students will learn how to enable and manage Windows Firewall, open and close ports in Windows Firewall, and manage advanced firewall settings.

Vista Objectives

- 304. Configure security settings in Windows Firewall.

Lecture Focus Questions:

- What are the default settings for Windows Firewall? What traffic is allowed by default?
- What purpose does a firewall exception *scope* serve?
- Where would you find ICMP settings in Windows Firewall?
- What is the result of selecting the **Block all incoming connections** option in Windows Firewall?
- What is the difference between the Remote Administration and Remote Desktop exceptions?
- What type of activity is allowed with the Remote Management exception?
- Where would you go to view a record of firewall activity?

Time

About 35 minutes

Lab/Activity

- Configure Windows Firewall
- Create a Port Exception

Section 4.1: Network and Sharing Center

Preparation

In this section students will learn how to configure networking services using the Network and Sharing Center which can be used to view, connect, manage, and diagnose networks.

Vista Objectives

- 401. Configuring networking by using the Network and Sharing Center.

Lecture Focus Questions:

- How is Network Discovery used by your computer?
- What is the difference between file sharing and public folder sharing?
- Which file locations are shared when you enable Media Sharing?
- You are creating a LAN connection that is used when you connect to the Internet at a hotel. Which network location type should you use?

Time

About 20 minutes

Lab/Activity

- Modify Network Services

Section 4.2: Network Connections

Preparation

This section discusses the basics of TCP/IP and DNS configuration settings used to configure network connections for Windows Vista. Students will learn how to configure a network connection for static or dynamic addressing, how to assign alternate IP configuration values, and how to configure a dial-up or VPN connection.

Vista Objectives

- 401. Configuring networking by using the Network and Sharing Center.
- 403. Configure Remote Access.

Lecture Focus Questions:

- What TCP/IP settings are required for a computer to communicate with another computer on a different network? Which setting is only required if you need to connect to computers on a different network?
- What are the default subnet masks for each IP address class?
- How can you tell if a computer has assigned itself an address using APIPA?
- When is APIPA used on a Vista computer? What two configuration changes disable APIPA?
- What is the Hosts file used for?

Time

About 40 minutes

Lab/Activity

- Configure TCP/IP Settings
- Create an Alternate IP Configuration

Section 4.3: Wireless Networking

Preparation

This section provides an overview of wireless networking technologies. Two types of wireless network configurations are available when implementing a wireless network. An infrastructure wireless network should be implemented on all but the smallest of wireless networks. An ad hoc network is usually used to create a direct, temporary connection between laptops. The students will learn common implementations used to secure a wireless network.

Vista Objectives

- 401. Configuring networking by using the Network and Sharing Center.

Lecture Focus Questions:

- Under which circumstances might you choose an ad-hoc wireless network?
- What advantages does WPA offer over WEP?
- What is the major limitation to implementing WPA2 as compared to WPA?
- Which wireless implementation method uses 802.1x and requires a RADIUS server?

Time

About 35 minutes

Lab/Activity

- Create a Wireless Profile

Section 4.4: Network Troubleshooting

Preparation

This section examines common problems with network connections and the solutions to resolve those problems. Students will become familiar with troubleshooting tools used to identify network problems: Network Diagnostics, Ipconfig, Ping, Tracert, Pathping, Netsh, and Nslookup.

Vista Objectives

- 402. Troubleshoot connectivity issues.

Lecture Focus Questions:

- Which command would you use at a command prompt to view the MAC address of a network adapter or the IP address of the DHCP server used to get an IP address?
- What additional information does **Pathping** provide that is not available when using **Ping**?
- What is the difference between **Ping** and **Tracert**?
- What does it mean if you can ping the IP address of a computer but you can't ping the host name?

Time

About 20 minutes

Section 4.5: Remote Services

Preparation

This section covers the basics of remote services. Remote Assistance is available in every edition of Windows Vista and allows a user to send a request for help from an expert. The expert can view the user's desktop, take control of the user's desktop, and assist as needed. Remote Desktop allows a user to access a computer and use it as if physically sitting at the terminal. Students will learn how to enable Remote Assistance and Remote Desktop and how to allow specific users to connect using Remote Desktop. They will learn how to open firewall ports for remote services.

Vista Objectives

- 403. Configure Remote Access.

Lecture Focus Questions:

- What are the different methods of sending an invitation with Remote Assistance? Under what conditions can a helper initiate a Remote Assistance session?
- How does a user retain control of a Remote Assistance session?
- What port must be opened to allow Remote Desktop to run through the firewall?
- What is printer redirection in Remote Desktop?

Time

About 15 minutes

Lab/Activity

- Configure Remote Settings

Section 5.1: Media Applications

Preparation

In this section students will learn about two applications included in Windows Vista that provide the ability to play media content on the computer. Media Player is available in all Vista versions and is the default application for playing media files on the computer. Media Center, available only in Vista Home Premium or Ultimate editions, provides access to TV, movies, music, photos, and online media with a remote control. Students will learn how to manage Media Player library files by configuring media sharing and monitor folders, and how to configure Media Player security and privacy settings. They will learn how to use Media Center to play, record, and manage media files.

Vista Objectives

- 501. Configure and troubleshoot media applications.

Lecture Focus Questions:

- What are the differences between Media Player and Media Center?
- In which editions of Vista is Media Center available?
- What components does a PC need to record and play live TV?
- How many extenders can you connect to a PC?
- What are the recommendations for configuring a wireless network for use with Media Center and extenders?

Time

About 25 minutes

Section 5.2: Windows Mail

Preparation

This section examines Windows Mail, a simple e-mail client included with each edition of Vista. Students will learn how to configure e-mail accounts to receive and send emails. They will also learn how to set up security on the account to control junk and phishing emails.

Vista Objectives

- 502. Configure Windows Mail.

Lecture Focus Questions:

- What are features of Windows Mail help minimize junk e-mail?
- Why does Mail prevent pictures and other Internet content from automatically downloading to your computer?
- Which file extensions does Mail automatically block when attached to an e-mail?
- You want to set up Windows Mail to download messages from a web mail service. What information should you have before you begin setup?

Time

About 35 minutes

Lab/Activity

- Configure Junk E-mail Settings
- Restrict Received Mail
- Troubleshoot Junk E-mail

Section 5.3: Meeting Space

Preparation

This section provides a basic overview of the online collaboration and meeting tool, Windows Meeting Space. Students will learn how to use Meeting Space to start a meeting, invite people to attend, or join an existing meeting. They will also learn how to share their desktop and a program in Meeting Space.

Vista Objectives

- 503: Configure Windows Meeting Space.

Lecture Focus Questions:

- Which editions of Vista support creating a meeting with Meeting Space? Which editions support joining a meeting?
- How does Meeting Space use People Near Me?
- What are the limitations on using Meeting Space (i.e. number of attendees, number of active meetings at a time)?
- When sharing your desktop with meeting attendees, how can you restrict the things that others can see?
- You have been invited to join a meeting in Meeting Space but cannot see the meeting. What can you do to fix the problem?

Time

About 20 minutes

Section 5.4: Windows Calendar

Preparation

This section discusses Windows Calendar which is used to remind users of important dates and appointments. Students will learn how to create calendars and calendar groups, import and export calendars, publish a calendar on the Internet, and subscribe to another person's published calendar.

Vista Objectives

- 504: Configure Windows Meeting Calendar.

Lecture Focus Questions:

- What are two ways you can make your calendar available for others to see?
- How can you make sure that a published calendar is automatically updated when you make changes on your computer?

Time

About 15 minutes

Section 5.5: Windows Fax and Scan

Preparation

This section provides an overview of Windows Fax and Scan used as a tool to send and receive faxes and scan documents. Common problems and solutions for working with Windows Fax and Scan are presented. Students will learn the process to create and configure fax accounts using Windows Fax and Scan. They will learn how to configure fax settings to specify send and receive properties, and how to configure fax permissions to control who can use the device.

Vista Objectives

- 505: Configure Windows Fax and Scan.

Lecture Focus Questions:

- In which editions of Vista is Fax and Scan available?
- What is the difference between a local fax modem and a fax server?
- What hardware components are needed to send a fax using a local fax machine?
- How do you fax a paper document using only a local fax modem?
- What should you check if you are unable to receive a fax after configuring the fax account?

Time

About 20 minutes

Lab/Activity

- Create a Fax Account
- Configure Fax Settings

Section 5.6: Windows Sidebar

Preparation

This section examines using the Windows Sidebar to display information for quick and easy access such as time, weather, news, stock quotes, and notes. The programs that are displayed on the Sidebar are called gadgets. Students will learn how to edit the Sidebar properties to configure startup options and Sidebar location. They will also learn how to add and remove gadgets from the Sidebar and move gadgets to the desktop.

Vista Objectives

- 506: Configure Windows Sidebar.

Lecture Focus Questions:

- How do you add gadgets to your desktop?
- What is the difference between closing the Sidebar and exiting the Sidebar? How does each affect gadgets in the Sidebar and on the desktop?
- What happens when you add more gadgets to the Sidebar? How do you view gadgets that are hidden?
- How can you add more gadgets beyond those that come with Vista?

Time

About 15 minutes

Lab/Activity

- Configure Sidebar Properties

Section 6.1: Performance Troubleshooting

Preparation

This section discusses performance tools and built-in diagnostic tools. The Reliability and Performance Monitor tools can be used to troubleshoot the CPU, hard disk, network resources, and memory components. Event Viewer is used to view system and error messages generated by the operating system and other programs. The built-in diagnostic tools discussed include Task Manager, Windows Memory Diagnostic Tool, Windows Network Diagnostics Tool, Problem Reports and Solutions, Startup Repair Tool, and Windows Experience Index. Students will learn how to evaluate and determine problems with a computer's reliability, pinpoint and diagnose network problems, and how to scan for and resolve memory problems.

Vista Objectives

- 601: Troubleshoot performance issues.
- 602: Troubleshoot reliability issues by using built-in diagnostic tools.

Lecture Focus Questions:

- Which performance monitoring tool would you use if you needed to save statistics over time?
- How do Data Collector Sets help troubleshoot performance problems?
- Which tool would you use to view running applications and processes on your system?
- Which tool helps you resolve problems in starting Vista?

Time

About 35 minutes

Section 6.2: Windows Update

Preparation

In this section students will learn how Windows Update downloads and installs the latest software updates to ensure the computer files are the most up to date and secure. By default, the Automatic Update client automatically checks for updates, downloads them and installs them, but frequency, schedule, download, and installation options can be customized. Students will learn how to enable Windows Update and configure update settings.

Vista Objectives

- 604: Configure Windows Update.

Lecture Focus Questions:

- Why is it important to keep your computer up-to-date with the latest software updates?
- What is the difference between an Important update and a Recommended update?
- How do you install Optional updates?
- How do you remove an installed update?

Time

About 15 minutes

Lab/Activity

- Configure Windows Update

Section 6.3: Data Protection

Preparation

This section teaches the students about protecting data using Encrypting File System (EFS) and BitLocker Drive Encryption. EFS is a method of encrypting folders and files that will allow only the original owner and a Designated Recovery Agent (DRA) to decrypt the file using a public or private key. Additional users can be identified to access the file. BitLocker protects offline data access on lost or stolen laptops by encrypting all the files on the operating system partition and requiring a BitLocker key to access the contents of the encrypted volume. Students will learn how to encrypt a file using EFS and add authorized users to a file encrypted with EFS.

Vista Objectives

- 604. Configure Data Protection.

Lecture Focus Questions:

- What is the purpose of the Data Recovery Agent?
- What is the difference between EFS and BitLocker?
- In what situations would BitLocker be more useful than EFS?
- What are the operating system and hardware requirements for using BitLocker using a hardware chip? Why do you need two partitions?
- Why is it important to save the BitLocker recovery key?
- How do you enter the BitLocker recovery key if you have to type it manually?

Time

About 20 minutes

Section 6.4: USB ReadyBoost

Preparation

This section discusses using USB ReadyBoost to increase system performance by using space on a flash device for fast cache access. ReadyBoost does not increase system memory, but instead provides a faster alternative to hard disk access. Vista uses the flash device for memory cache.

Vista Objectives

- 601. Troubleshoot performance issues.

Lecture Focus Questions:

- What is the difference between the ReadyBoost cache and the swap file on a hard disk?
- What are the flash memory requirements for ReadyBoost support?
- What type of flash devices are not supported by ReadyBoost?
- You have a system with 512 MB of system memory. How much flash memory should you have available when using ReadyBoost? How much effective ReadyBoost memory will this give you?

Time

About 5 minutes

Section 6.5: File Access

Preparation

This section teaches students how to manage files across a network using file sharing. Two file sharing methods are discussed. The Public Folder Sharing method allows multiple users on the same computer and other network users access to files in the Public folder. The NTFS File Sharing method is used to share files not located in Public folders. The sharing permissions can be set for specific users or groups.

Vista Objectives

- 401. Configuring networking by using the Network and Sharing Center.
- 501. Configure and troubleshoot media applications.
- 604. Configure Data Protection.

Lecture Focus Questions:

- What are the differences between share permissions and NTFS permissions?
- When share permissions and NTFS permissions are set on a folder, which set of permissions will apply to a user who accessed the folder? Consider both network and local access.
- How do share roles correlate to share permissions?
- Which share role can't you explicitly assign? What role is functionally equivalent to that role?
- What type of devices can read streamed media made available through Media Sharing on a Vista computer?

Time

About 35 minutes

Lab/Activity

- Share a Folder
- Share a Folder 2

Section 6.6: Backup and Restore

Preparation

This section examines the backup and restore tools used to protect system and user files. Automatic File Backup can be configured to schedule regular backups of user files. Complete PC Backup backs up everything on the system. System Restore monitors the system and saves restore points (snapshots of the operating system files) at regular intervals and before a substantial change is made. Restore points do not protect user data files and cannot be used to restore deleted files. System Restore is used to roll the computer back to a previous system state. Previous Versions takes snapshots of files and folders to protect against accidental deletion or modification of user data files.

Vista Objectives

- 604. Configure Data Protection.

Lecture Focus Questions:

- What are the limitations for backup destinations when using Automatic File Backup?
- Which system protection methods protect user data?
- You have accidentally deleted an important document from your computer. Which restore method would be the fastest to recover the lost file?
- What should you do if you find that there are no restore points saved on your computer?
- What happens to the original file when you restore a file using Previous Versions? What happens when you Copy a previous version?

Time

About 30 minutes

Lab/Activity

- Schedule an Automatic Backup
- Make a Complete PC Backup
- Create a Restore Point

Section 7.1: Mobile Devices

Preparation

This section provides information about tools for configuring mobile devices. The Mobility Center can be used to configure settings for mobile devices. The Sync Center is used to keep files and other information in sync between a computer and mobile devices, network folders, and other programs. The Sync Center is used to set up a synchronization partnership to govern the synchronization behavior between devices.

Vista Objectives

- 701. Configure Mobile Display Settings.
- 702. Configure Mobile Devices.

Lecture Focus Questions:

- What are the two connection methods for establishing a synchronization partnership with a mobile device?
- What is the difference between extending the desktop and duplicating the desktop?
- How do you configure a network projector with an IP address?
- What should you do if you can see a network projector but are unable to connect to it?

Time

About 20 minutes

Section 7.2: Tablet PC

Preparation

This section provides a basic overview of working with Tablet PCs. Students will learn how to use the Input Panel to enter text on a Tablet PC, configure handwriting recognition, flicks, and gestures, and how to calibrate the screen.

Vista Objectives

- 703. Configure Tablet PC software.

Lecture Focus Questions:

- What are the different ways that the Input Panel can accept text entry?
- What is the difference between a *flick* and a *gesture*?
- What is the difference between using a stylus and a touch screen (or enabling touch input)?
- How can you tell when screen calibration is necessary?

Time

About 20 minutes

Section 7.3: Power Plans

Preparation

In this section students will learn how power plans are used to optimize the power consumption of mobile devices. Power Plan settings identify specific devices that can be controlled or actions to take to conserve power. Students will learn how to create and edit power plan settings.

Vista Objectives

- 704. Configure Power Options.

Lecture Focus Questions:

- What is the difference between *sleep* and *hibernation*?
- How does the hybrid sleep power state work? Where is RAM data stored during hybrid sleep?
- Which power saving states are best if you want to conserve power but ensure that no data is ever lost?

Time

About 25 minutes

Lab/Activity

- Change the Power Plan
- Create a Custom Power Plan