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## **5118 –Maintaining & Troubleshooting Windows Vista Computers**

**3 Day**

This three-day instructor-led course provides students with the knowledge and skills to successfully maintain and troubleshoot Windows Vista computers.

It will provide them with the knowledge and skills necessary to identify technical problems that can occur in an organization's client computers. The course will focus on five main troubleshooting areas: operating system, hardware, networking, security, and applications.

It will also provide the knowledge and skills necessary to monitor and maintain Windows Vista client computers.

### **WHO SHOULD ATTEND**

The audience for this course is experienced enterprise-level IT Professionals who focus on a broad range of desktop operating system, desktop application, mobile device, networking, and hardware support issues. As working professionals, students must quickly resolve support issues by combining technical expertise with problem solving and decision making skills and a deep understanding of their business and technical environments. They must consider all variables, justify resolutions with a logical troubleshooting approach, and relate tradeoffs to business and technical requirements and constraints. Students will have used Microsoft Windows XP-SP2 and may have experience with Windows server operating systems. Their jobs require them to stay knowledgeable and skilled about new versions and updates of technology in the business environment.

### **PREREQUISITES**

Before attending this course, students must have:

- Experience supporting previous versions of the Windows operating system.
- Familiarity with an IT helpdesk ticketing system.
- Experience researching online and local knowledge bases.
- Experience running commands from a command window, such as the DOS command prompt.
- Familiarity with computer hardware and devices, such as the ability to use Windows device manager and look for unsupported devices.
- Basic TCP/IP knowledge, such as knowing why you need to have a valid IP address.



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- Basic Windows and Active Directory knowledge, such as knowledge about domain user accounts, domain vs. local user accounts, user profiles, and group membership.
- Fundamentals of applications, such as how a client communicates with the server in client/server applications.
- Experience reviewing logs, such as understanding chronology, sequential order, severity, etc.

In addition, it is recommended, but not required, that students have completed the following courses:

- 5115A: Installing and Configuring the Windows Vista Operating System
- 5116A: Configuring Windows Vista Mobile Computing and Applications
- Important: This learning product will be most useful to people who intend to use their new skills and knowledge on the job immediately after training.

## AT COURSE COMPLETION

After completing this course, students will be able to:

- Plan and apply a troubleshooting methodology for an organization.
- Describe how the Windows Vista platform helps address troubleshooting requirements for important technical areas.
- Identify the most appropriate method to troubleshoot Windows Vista computers.
- Identify Windows Vista tools that can be used to help in the troubleshooting process.
- Identify important maintenance tools that will be used as part of IT operations for their organizations.
- Describe how monitoring and optimization tools in Windows Vista can be used to assist in troubleshooting and keeping computers performing optimally.

## LESSON TOPICS

### Module 1: A Troubleshooting Methodology

This module explains what a troubleshooting methodology is, its role in an enterprise, and how it can be used to improve the support function within an organization.

#### Lessons

- Overview of a Troubleshooting Methodology



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- Overview of Troubleshooting Stages
- Troubleshooting Component Areas

### **Lab: Preparing for Remote Troubleshooting**

- Obtaining Information Remotely from Windows Vista
- Using the System Information Tool Remotely

After completing this module, students will be able to:

- Identify the users of the troubleshooting methodology.
- Identify the most important troubleshooting component areas.
- Determine which issues directly affect the troubleshooting process.

## **Module 2: Troubleshooting Operating Systems**

This module explains how to identify and troubleshoot issues that affect the operating system's ability to boot and the services that it is running.

### **Lessons**

- Overview of the Windows Vista Startup Process
- Troubleshooting the Windows Vista Startup Process with Windows RE
- Troubleshooting Operating System Services

### **Lab : Troubleshooting the Operating System**

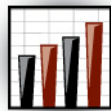
- Gathering System Information and Developing a Plan of Action
- Implementing the Proposed Plan of Action
- Clean-Bootting Windows Vista

After completing this module, students will be able to:

- Identify the available recovery options in Windows Vista.
- Determine the capabilities of each recovery option.
- Troubleshoot operating system services.

## **Module 3: Troubleshooting Hardware**

This module explains how to troubleshoot hardware-related problems and how to use Windows Vista tools to troubleshoot device problems.



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### **Lessons**

- Overview of Troubleshooting Hardware
- Dealing with Physical Failures
- Dealing with Device Driver Failures
- Troubleshooting Printing in Windows Vista
- Troubleshooting Microsoft BitLocker Protected Computers

### **Lab : Troubleshooting Hardware**

- Gathering Customer Information and Developing a Plan of Action
- Resolving Printing Problems
- Checking for Signed Device Drivers

After completing this module, students will be able to:

- Identify basic types of hardware-related troubleshooting problems.
- Determine which problems are related to hardware failures.
- Determine which problems are caused by device drivers.
- Identify recovery options for computers that are protected by BitLocker.

### **Module 4: Troubleshooting Networks**

This module explains how to identify the most likely cause of network problems in a number of given network scenarios.

### **Lessons**

- Determining Network Settings
- Troubleshooting Network Connections

### **Lab : Troubleshooting Networks**

- Gathering Customer Information
- Gathering Relevant Computer Information
- Resolving the Problem

After completing this module, students will be able to:

- Obtain information to help in network troubleshooting.



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- Explain how you can use the Network Diagnostics Framework to troubleshoot network problems.
- Identify solutions to common network problems.

## **Module 5: Troubleshooting Security Issues**

After completing this module, students will be able to troubleshoot issues that are caused by security-related configurations, such as User Account Control (UAC) and Windows Firewall.

### **Lessons**

- Overview of User Account Control
- Troubleshooting User Account Control
- Implementing Windows Firewall
- Implementing Windows Defender

### **Lab : Troubleshooting Security Related Issues**

- Gathering Customer and System Information and Developing a Plan of Action
- Implementing a Plan of Action
- Additional Security Checks

After completing this module, students will be able to:

- Explain the User Account Control architecture.
- Apply best practices for working with User Account Control.
- Troubleshoot User Account Control-related problems.
- Troubleshoot issues related to Windows Firewall.
- Configure Windows Firewall by using Group Policy.
- Troubleshoot issues related to Windows Defender.
- Configure Windows Defender.

## **Module 6: Troubleshooting Applications**

After completing this module, students will be able to troubleshoot problems that are caused by some applications which are not compatible with Windows Vista.

### **Lessons**

- Windows Application Troubleshooting
- Web Application Troubleshooting



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### **Lab : Troubleshooting Applications**

- Analyzing Collected Information and Identifying Probable Causes of a Web Application Problem
- Implementing a Plan of Action

After completing this module, students will be able to:

- Troubleshoot Windows application problems.
- Troubleshooting Web application problems.

### **Module 7: Maintaining and Optimizing Windows Vista**

After completing this module, students will be able to identify tools that can be used to maintain a healthy operating system and optimize its performance.

#### **Lessons**

- Maintaining Windows Vista
- Optimizing Windows Vista Performance
- Monitoring Windows Vista

### **Lab : Maintaining and Optimizing Windows Vista**

- Analyzing Collected Information and Identifying Probable Causes of a Computer Performance Problem
- Implementing a Plan of Action
- View and Interpret Reports in Performance Monitor

After completing this module, students will be able to:

- Identify Windows Vista maintenance tasks.
- Identify Windows Vista optimization tools.
- Explain the Windows Vista monitoring process.