MOC 6293 (A) Troubleshooting and Supporting Windows 7 in the Enterprise

Course Summary

Description

This course will teach IT Professionals, experienced with Microsoft Windows XP and Windows Vista in a Tier 2 support environment, how to support the operating system and solve technical troubleshooting problems in a Windows 7 and Windows Server 2008 R2 networking environment.
This course also directly supports the EDST exam.

- Advanced desktop management to reduce complexity and automate tasks
- Managing remote laptop PCs
- Security hardening and Defense-in-depth
- Meet emerging compliance and governance requirements
- Reduce help desk calls through group policy configuration
- Improving system performance, resiliency, and reliability

Objectives

At the end of this course, students will be able to:

- Resolve startup issues on a computer with Windows 7 installed.
- Resolve issues related to the application of Group Policy.
- Resolve issues related to hardware devices and device drivers.
- Resolve issues related to network connectivity.
- Resolve remote connectivity issues.
- Resolve user profile and logon script issues.
- Resolve issues related to security systems such as Encrypting File Systems (EFS), BitLocker, and file permissions.
- Resolve issues related to operating system features and applications.
- Resolve issues related to performance.

Topics

- Resolving Startup Issues
- Using Group Policy to Centralize Configuration
- Resolving Issues for Hardware Devices and Device Drivers
- Resolving Network Connectivity
- Resolving Remote Connectivity
- Resolving Issues with Logon and Resource Access
- Resolving Issues Related to Security
- Resolving Issues Related to Operating Systems and Applications
- Resolving Performance-Related Issues
- Appendix A: Implementing a Troubleshooting Methodology

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MOC 6293 (A) Troubleshooting and Supporting Windows 7 in the Enterprise

Course Summary (cont'd)

Audience

The primary audience for this course is the Enterprise Desktop Support Technician (EDST) providing Tier 2 support. The secondary audience for this course is the Desktop Support Technician (DST) in an Upper MORG Organization.

EDSTs are experienced IT Professionals who focus on a broad range of desktop operating system, desktop application, mobile device, networking, and hardware support issues. EDSTs must combine technical expertise with problem solving and decision making skills and a deep understanding of their business and technical environments to quickly resolve support issues. They consider all variables, justify resolutions with a logical troubleshooting approach, and relate tradeoffs while adhering to business and technical requirements and constraints. EDSTs are primarily responsible for the maintenance and support of PC desktops, installing and testing line-of-business applications on end-user computers, and physically making changes to user desktops or re-images as required.

EDSTs have used previous versions of Microsoft Windows desktop operating systems and may have experience with Microsoft Windows Server operating systems. Their job requires them to keep their skills and knowledge current with new versions and updates of technology as defined by the business environment. They use EMS/PowerShell scripts for routine tasks and bulk operations. They conduct most server management tasks remotely by using Terminal Server or other administration tools installed on their local workstations.

Prerequisites

In addition to their professional experience, students who attend this training should already have the following technical knowledge:

- Networking fundamentals, including TCP/IP/User Datagram Protocol (UDP), Domain Name System (DNS)
- Microsoft Active Directory principles and management
- Microsoft Windows Server 2008 fundamentals
- Microsoft Windows Client fundamentals
- Fundamentals of using the 2010 Microsoft Office system or the 2007 Microsoft Office system

Students who attend this training can meet the prerequisites by attending the following courses, or obtaining equivalent knowledge and skills:

- Course 6292A: Installing and Configuring Windows 7 Client
- Course 6420B: Fundamentals of Windows Server 2008

Duration

Three days

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Course Outline

I. Resolving Startup Issues

This module describes how to identify and troubleshoot issues that affect the operating system's ability to start, and how to identify problematic services that are running on the operating system. It also describes how to use the Microsoft Windows 7 operating system advanced troubleshooting tools, collectively known as the Microsoft Windows Recovery Environment (Windows RE).

A. Lesson 1: Overview of the Windows 7 Recovery Environment
B. Lesson 2: Configuring and Troubleshooting Startup Settings
C. Lesson 3: Troubleshooting Issues with Operating System Services

Lab: Resolving Startup Issues

- Exercise 1: Resolving a Startup Problem (1)
- Exercise 2: Resolving a Startup Problem (2)

After completing this module, students will be able to:

- Use Windows 7 recovery tools to troubleshoot startup problems.
- Configure and troubleshoot startup settings.
- Troubleshoot operating system services.

II. Using Group Policy to Centralize Configuration

This module explains how Group Policy works and how to identify when an organization is not applying Group Policy objects (GPOs) properly.

A. Lesson 1: Overview of Group Policy Application
B. Lesson 2: Resolving Client Configuration Failures and GPO Application Issues

Lab: Using Group Policy to Centralize Configuration

- Exercise 1: Resolve Group Policy Application No. 1
- Exercise 2: Resolve Group Policy Application No. 2

After completing this module, students will be able to:

- Describe Group Policy application.
- Troubleshoot client configuration failures and GPO application issues.

III. Resolving Issues for Hardware Devices and Device Drivers

This module explains how to troubleshoot hardware failures, and details physical hardware failures and those of drivers for hardware devices.

A. Lesson 1: Overview of Hardware Troubleshooting
B. Lesson 2: Troubleshooting Physical Failures
C. Lesson 3: Troubleshooting Failures of Device Drivers

Lab: Resolving Issues for Hardware Devices and Device Drivers

- Exercise 1: Resolving Hardware Issues
- Exercise 2: Configuring Group Policy to Control Device Installation
- Exercise 3: Checking for Unsigned Drivers

After completing this module, students will be able to:

- Identify basic issues with hardware.
- Determine problems relating to hardware failures.
- Determine problems that device drivers cause.

IV. Resolving Network Connectivity Issues

This module explains how to configure and troubleshoot both wired and wireless network connections.

A. Lesson 1: Determining Network Settings
B. Lesson 2: Troubleshooting Issues with Network Connectivity

Lab: Resolving Network Connectivity Issues

- Exercise 1: Resolving a Network Problem (1)

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MOC 6293 (A) Troubleshooting and Supporting Windows 7 in the Enterprise

Course Outline (con'td)

- Exercise 2: Resolving a Network Problem (2)

After completing this module, students will be able to:

- Determine the network configuration of client computers.
- Troubleshoot network connections.

V. Resolving Remote Connectivity Issues

This module explains how to configure and troubleshoot technologies that enable remote users to connect to an organization's network infrastructure. These technologies can include virtual private networks (VPNs), Network Access Protection (NAP), and Windows 7 DirectAccess.

A. Lesson 1: Troubleshooting VPN Connectivity Issues
B. Lesson 2: Using Remote Desktop
C. Lesson 3: Troubleshooting User Issues by Using Remote Assistance
D. Lesson 4: Troubleshooting NAP Issues
E. Lesson 5: Troubleshooting DirectAccess Issues

Lab: Resolving Remote Connectivity Issues

- Exercise: Resolving a Remote Connectivity Problem

After completing this module, students will be able to:

- Configure and troubleshoot VPN connections.
- Use Remote Desktop.
- Use Remote Assistance.
- Troubleshoot NAP issues.
- Troubleshoot DirectAccess issues.

VI. Resolving Issues with Logon and Resource Access

This module explains how to troubleshoot and resolve logon issues related to user profiles, file access, and printer access.

A. Lesson 1: Troubleshooting Issues with User Logon
B. Lesson 2: Troubleshooting Issues with User Profiles
C. Lesson 3: Troubleshooting Issues with File Access
D. Lesson 4: Troubleshooting Issues with Printer Access

Lab: Resolving Issues with Logon and Resource Access

- Exercise 1: Troubleshooting Offline Files
- Exercise 2: Troubleshooting a Missing Drive Mapping
- Exercise 3: Troubleshooting Missing Files in My Documents

After completing this module, students will be able to:

- Troubleshoot issues relating to user logons.
- Troubleshoot issues relating to user profiles.
- Troubleshoot issues relating to file access.
- Troubleshoot issues relating to printer access.

VII. Resolving Issues Related to Security

This module explains how to work with the wide range of security features that Microsoft Windows 7 use's to secure data, including Encrypting File System (EFS) and BitLocker, as well as security configuration options included with Internet Explorer, and using file permissions to limit file access, usually on file servers.

A. Lesson 1: Recovering Files Encrypted by EFS
B. Lesson 2: Recovering Drives Encrypted by BitLocker
C. Lesson 3: Troubleshooting Issues with Internet Explorer and Content Access
D. Lesson 4: Troubleshooting Issues with File Permissions

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MOC 6293 (A) Troubleshooting and Supporting Windows 7 in the Enterprise
Course Outline (cont'd)

Lab: Resolving Issues Related to Security

- Exercise 1: Recovering a BitLocker Encrypted Drive
- Exercise 2: Resolving a Security Issue in Internet Explorer
- Exercise 3: Troubleshooting a File Access Problem

After completing this module, students will be able to:

- Recover files encrypted by EFS.
- Recover drives encrypted by BitLocker.
- Troubleshoot issues with Internet Explorer and content access.
- Troubleshoot issues with file permissions.

VIII. Resolving Issues Related to Operating Systems and Applications

This module explains how to support the installation and operations of applications. It also addresses how to ensure that applications continue to function correctly and prevent security issues by applying updates in a timely way.

A. Lesson 1: Troubleshooting Issues with Application Installation
B. Lesson 2: Troubleshooting Issues with Application Operations
C. Lesson 3: Applying Application and Windows Updates

Lab: Resolving Issues Related to Operating Systems and Applications

- Exercise 1: Troubleshooting Application Installation
- Exercise 2: Troubleshooting Windows Updates
- Exercise 3: Troubleshooting AppLocker Policy Application
- Exercise 4: Troubleshooting Application Startup

After completing this module, students will be able to:

- Troubleshoot issues with application installation.
- Troubleshoot issues with application operations.
- Apply application and Microsoft Windows updates.

IX. Resolving Performance-Related Issues

This module explains how to conduct proactive monitoring of your Microsoft Windows 7 computers to avoid performance-related problems. It also covers supporting users by optimizing Windows 7, and how to collect and interpret data that pertains to performance characteristics.

A. Lesson 1: Configuring Performance Options in Windows 7
B. Lesson 2: Monitoring Reliability and Performance
C. Lesson 3: Overview of Event Viewer

Lab: Resolving Performance-Related Issues

- Exercise: Resolving a Performance Problem

After completing this module, students will be able to:

- Configure performance options in Windows 7.
- Monitor reliability and performance of Windows 7 computers.
- Use Event Viewer to identify and help resolve problems with Windows 7 computers.

X. Appendix A: Implementing a Troubleshooting Methodology

This supplementary material / optional Module covers the responsibilities of an enterprise desktop support technician (EDST), the benefits of developing a troubleshooting methodology, and the benefits of following the procedures laid down in that methodology.

A. Lesson 1: Introduction to the Enterprise Desktop Support Technician Job Role
B. Lesson 2: Overview of Troubleshooting Steps

After completing this module, students will be able to:

- Describe the job role of the EDST.
- Describe the steps of a typical troubleshooting methodology.

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