

MOC 10982-E: Supporting and Troubleshooting Windows 10

Course Summary

Description

This is a 5-day ILT course that is designed to provide students with the knowledge and skills required to support and troubleshoot Windows 10 PCs and devices in a Windows Server domain environment. These skills include understanding of Windows 10 features, how they can be used in an Active Directory environment and how to troubleshoot them.

Objectives

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

- Describe the processes involved in planning and using a troubleshooting methodology for Windows 10.
- Troubleshoot startup issues and operating system services on a Windows 10 PC.
- Perform system recovery.
- Resolve issues related to hardware devices and device drivers.
- Administer Windows 10 devices.
- Troubleshoot issues related to network connectivity.
- Configure Windows 10 devices by using Group Policy.
- Configure and troubleshoot user settings.
- Configure and troubleshoot resource access.
- Implement remote connectivity.
- Deploy and troubleshoot applications.
- Maintain Windows 10 devices.

Topics

- Implementing a Troubleshooting Methodology
- Troubleshooting Startup Issues
- Performing System Recovery
- Troubleshooting Hardware and Device Drivers
- Administering Windows 10
- Resolving Issues with Network Connectivity
- Troubleshooting Group Policy
- Configuring and Troubleshooting User Settings
- Configuring and Troubleshooting Resource Access
- Troubleshooting Remote Connectivity
- Troubleshooting Applications
- Maintaining Windows 10

Audience

The primary audience for this course is the Enterprise Desktop Support Technician (EDST), who provides Tier 2 support to users running Windows 10 personal computers (PCs) and devices in medium to large enterprise organizations, within a Windows domain environment. EDSTs focus on a broad range of technical issues for Windows operating systems (OSs), devices, cloud services, applications, networking, and hardware support. In the overarching scenario, if an enterprise offers the service, the EDST is asked to support it.

The key responsibilities include resolving technical issues pertaining to Windows 10 installation and migration, activation, performance, profiles, settings; and device synchronization. Some other key responsibilities include local and remote network access; access to applications, access to data and printers; authentication, Endpoint security and policy; OS and data recovery.

The secondary audience for this course are IT professionals who administer and support Windows 10 desktops, devices, users, and associated network and security resources. Students who seek certification in the following exams will also benefit from this course:

- 70-697: Configuring Windows Devices
- 70-698: Installing and Configuring Windows 10

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Course Summary (cont'd)

Prerequisites

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

- Networking fundamentals, including Transmission Control Protocol /Internet Protocol (TCP/IP), User Datagram Protocol (UDP), and Domain Name System (DNS).
- Microsoft Active Directory Domain Services (AD DS) principles.
- Understanding of the Public Key Infrastructure (PKI) components.
- Windows Server 2016 fundamentals.
- Microsoft Windows Client essentials; for example, experience with Windows 10 or knowledge from the courses 20697-1 and 20697-2.

Duration

Five days

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Course Outline

I. Implementing a Troubleshooting Methodology

This module describes the new Windows 10 operating system features and devices; it also describes the process of developing and applying a Windows 10 troubleshooting methodology.

- A. Overview of Windows 10
- B. Introduction to the EDST Job Role
- C. Overview of the Troubleshooting Steps
- D. Troubleshooting Tools
 - Lab : Using Troubleshooting Tools

II. Troubleshooting Startup Issues

This module describes how to identify and troubleshoot startup issues that affect—and problematic services that run on—a Windows 10 operating system. This module introduces potential problems that can cause startup issues in Windows 10. It also provides an overview of the Windows startup process, including the Windows Recovery Environment (Windows RE) and Boot Configuration Data (BCD).

- A. Overview of the Windows 10 Startup Recovery Environment
- B. Configuring the Registry
- C. Troubleshooting Startup Settings
- D. Recovering BitLocker-Protected Drives
 - Lab : Troubleshooting Startup Issues
 - Exploring Windows RE
 - Resolving a Startup Issue
 - Lab : Recovering BitLocker-Encrypted Drives
 - Recovering a BitLocker-Encrypted Drive
 - Creating a New BitLocker Password

III. Performing System Recovery

This module describes how to resolve issues related to operating system services and how to recover a computer.

- A. Troubleshooting Operating System Service Issues
- B. Recovering a Computer
 - Lab : Performing System Recovery
 - Preparing for System Recovery
 - Recovering a Computer

IV. Troubleshooting Hardware and Device Drivers

This module explores how to troubleshoot issues related to device drivers and hardware devices.

- A. Troubleshooting Device Driver Failures
- B. Overview of Hardware Troubleshooting
 - Lab : Troubleshooting Hardware and Device Driver Issues
 - Troubleshooting a Missing Device Driver
 - Resolving Hardware Problems

V. Administering Windows 10

This module describes how to use the various administration tools in Windows 10 to resolve issues. It describes the features and functionalities of tools such as Windows Admin Center, Remote Desktop, Quick Assist, and Windows PowerShell.

- A. Overview of Administration Tools
- B. Using Remote Desktop
- C. Introduction to Windows PowerShell
- D. Remoting with Windows PowerShell
- E. Introduction to Provisioning
 - Lab : Troubleshooting Remote Computers through Remote Desktop
 - Using Remote Desktop
 - Lab : Troubleshooting a Remote Computer by Using Windows PowerShell
 - Using Windows PowerShell Remoting

VI. Resolving Issues with Network Connectivity

This module describes how to identify network settings and troubleshoot issues related to network connectivity in wired and wireless networks, IPv4 and IPv6 connectivity, and name resolution.

- A. Determining Network Settings
- B. Troubleshooting Network Connectivity
- C. Troubleshooting Name Resolution
 - Lab : Resolving Network Connectivity Issues
 - Configuring Network Settings
 - Resolving a Network Problem (1)
 - Resolving a Network Problem (2)

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Course Outline (cont'd)

VII. *Troubleshooting Group Policy*

This module provides an overview of Group Policy application and describes how to resolve issues in client configuration GPO application.

- A. Overview of Group Policy Application
- B. Resolving Client-Configuration Failures and GPO Application Issues
 - Lab : Troubleshooting Issues with Group Policy Application
 - Working with GPOs
 - Resolving Group Policy Application (1)
 - Resolving Group Policy Application (2)
 - Resolving Group Policy Application (3)
 - Lab : Resolving Issues with Group Policy
 - Resolving Group Policy Application (4)

VIII. *Configuring and Troubleshooting User Settings*

This module describes the common sign-in issues, how to detect them, and how to troubleshoot these issues. The module also provides an overview of user account types that are supported by Windows 10 and how authentication works for those accounts.

- A. Troubleshooting Sign-In Issues
- B. Troubleshooting the Application of User Settings
 - Lab : Troubleshooting Sign-In Issues
 - Resolving a Sign-In Issue
 - Lab : Configuring and Troubleshooting the Application of User Settings
 - Configuring UE-V
 - Configuring Folder Redirection
 - Resolving a Folder Redirection Issue

IX. *Configuring and Troubleshooting Resource Access*

This module describes how to troubleshoot issues with file permissions and printer access. It also describes how to configure and manage file synchronization and file recovery in Windows 10.

- A. Troubleshooting File Permissions Issues

- B. Troubleshooting Issues with Printer Access
- C. Configuring and Troubleshooting File Synchronization
- D. Performing File Recovery in Windows 10
 - Lab : Troubleshooting File Access Issues
 - Resolving a File Access Issue (1)
 - Resolving a File Access Issue (2)
 - Resolving a File Access Issue (3)
 - Lab : Troubleshooting Printer Issues
 - Resolving a Printer Issue (1)
 - Resolving a Printer Issue (2)
 - Lab : Configuring and Troubleshooting File Synchronization
 - Troubleshooting Work Folders
 - Lab : Recovering Data
 - Preparing for File Recovery
 - Resolving Issues by Using Previous Versions (Optional)

X. *Troubleshooting Remote Connectivity*

This module provides an overview of Remote Access and describes how to troubleshoot issues with VPN connectivity.

- A. Overview of Remote Access
- B. Troubleshooting Issues with VPN Connectivity
 - Lab : Troubleshooting VPN Connectivity
 - Troubleshooting VPN Connectivity Issue 1
 - Troubleshooting VPN Connectivity Issue 2

XI. *Troubleshooting Applications*

This module explains how to troubleshoot common desktop app operations issues. It also describes the Universal Windows apps, Microsoft Store, and Microsoft Store for Business, and explains how to resolve issues related to Universal Windows apps.

- A. Troubleshooting Desktop Apps
- B. Managing Universal Windows Apps
- Lab : Troubleshooting Desktop Apps

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Course Outline (cont'd)

- Troubleshooting AppLocker Policy Applications
- Troubleshooting Application Compatibility Issues
- Lab : Provisioning a Kiosk Device
 - Creating a provisioning package
 - Applying a provisioning package

XII. Maintaining Windows 10

This module describes how to troubleshoot performance issues in Windows 10. It also explains how to apply and troubleshoot Windows updates.

- A. Monitoring and Troubleshooting Computer Performance
- B. Applying Windows Updates
- Lab : Maintaining Windows 10
 - Using Performance Monitor
 - Configuring Windows Update Settings