



# Supporting and Troubleshooting Windows 11

## Course 55342: 4 days; Instructor-Led

### Introduction

This is a 4-day ILT course that is designed to provide students with the knowledge and skills required to support and troubleshoot Windows 11 PCs and devices in an on-premises Windows Server Active Directory domain environment. These skills include understanding:

- Important Windows 11 features
- How these features are used in an Active Directory
- How to troubleshoot these features

### At Course Completion

After completing this course, students will be able to:

- Describe the processes involved in planning and using a troubleshooting methodology for Windows 11.
- Troubleshoot startup issues and operating system services on a Windows 11 PC.
- Perform system recovery.
- Resolve issues related to hardware devices and device drivers.
- Administer Windows 11 devices.
- Troubleshoot issues related to network connectivity.
- Configure Windows 11 devices by using Group Policy.
- Configure and troubleshoot user settings.
- Configure and troubleshoot resource access.
- Implement remote connectivity.
- Deploy and troubleshoot applications.
- Maintain Windows 11 devices.

### Audience

The primary audience for this course is Desktop Support Technicians (DSTs). These technicians provide Tier 2 support to users with domain-joined computers running the Windows 11 OS, typically in medium to large enterprise organizations.

The secondary audience for this course are IT professionals who administer and support Windows 11 desktops, devices, users, and associated network and security resources.

### Prerequisites

- 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 fundamentals.
- Microsoft Windows Client essentials; for example, experience with Windows 10 or 11 or knowledge from the M70697A: Implementing and Managing Windows 11 course.

### Course Outline

#### Module 1: Introducing Windows 11

This module describes the new Windows 11 operating system features and devices, with a particular focus on what's changed since Windows 10.

The modules also describes the process of developing and applying a Windows 11 troubleshooting methodology.

**Lessons**

- Overview of Windows 11
- New features in Windows 11
- Highlight significant changes from Windows 10
- Brief overview of UI changes
- Includes overview of system architecture, including both Linux and Android subsystems
- Troubleshooting installation and deployment
- Overview of required hardware, identifying differences from Windows 10
- Describe common reasons why devices cannot upgrade to Windows 11
- Recommendations for typical troubleshooting procedures
- Introduction to troubleshooting tools
- Task Manager
- Resource Monitor
- Performance Monitor
- Review of revised Settings app

**Lab 1: Using Windows 11 Troubleshooting Tools**

- Use Windows 11 troubleshooting tools

After completing this module, students will be able to:

- Describe the Windows 11 operating system and its features
- Troubleshoot installation and deployment of Windows 11
- Describe typical troubleshooting procedures
- Use common Windows 11 troubleshooting tools

**Module 2: Administering Windows 11 Remotely**

This module describes how to use the various remote administration tools in Windows 11 to resolve issues. It describes the features and functionalities of tools such as Windows Admin Center, Remote Desktop, Quick Assist, and Windows PowerShell.

**Lessons**

- Overview of administration tools
- Using Remote Desktop
- Using Quick Assist
- Using Windows Admin Center
- Introduction to Windows PowerShell
- Remoting with Windows PowerShell
- Enabling PowerShell Remoting
- Trusted hosts
- Introduction to provisioning

**Lab 1: Administering Windows 11 remotely**

- Implement Remote Desktop
- Manage remote computers using Windows PowerShell

After completing this module, students will be able to:

- Select a suitable remote administration tool
- Implement Remote Desktop connections
- Use Windows PowerShell Remoting
- Describe Windows provisioning

**Module 3: Troubleshooting startup and performing system recovery**

This module describes potential problems that can cause startup issues in Windows 11. It also provides an overview of the Windows startup process, including the Windows Recovery Environment (Windows RE) and Boot Configuration Data (BCD). It also describes how to resolve issues related to operating system services and how to recover a computer.

**Lessons**

- Overview of the Windows 11 Recovery Environment

- Configuring the Registry
- Troubleshooting startup settings
- Recovering BitLocker-protected drives
- Troubleshooting OS service Issues
- Recovering a computer

**Lab 1: Troubleshooting startup and performing system recovery**

- Explore Windows RE
- Resolve a startup issue
- Configure and recover BitLocker
- Recover a computer after failure

After completing this module, students will be able to:

- Describe the Windows 11 recovery environment
- Configure the registry
- Troubleshoot startup settings
- Recover BitLocker encrypted drives
- Troubleshoot operating system services
- Recover a computer
- Resolve common application compatibility issues

**Module 4: Troubleshooting devices and device drivers**

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

**Lessons**

- Overview of hardware troubleshooting
- Group Policy settings that can control/inhibit hardware installation
- Troubleshooting device driver failures

**Lab 1: Troubleshooting devices and device drivers**

- Troubleshoot missing drivers
- Resolve a hardware issue

After completing this module, students will be able to:

- Describe procedures for troubleshooting hardware
- Describe available group policy settings for device management
- Troubleshoot device driver failures

**Module 5: Configuring and troubleshooting 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. This module also provides an overview of Remote Access and describes how to troubleshoot issues with VPN connectivity.

**Lessons**

- Identifying incorrectly configured network and TCP/IP settings
- Overview of IPv4 subnet addressing to help identify incorrectly configured devices
- Determining Network Settings
- Troubleshooting network connectivity
- Troubleshooting name resolution
- Overview of remote access
- Troubleshooting issues with VPN connectivity

**Lab 1: Configuring and troubleshooting network connectivity**

- Troubleshoot a network connectivity issue
- Troubleshoot name resolution
- Troubleshoot remote access

After completing this module, students will be able to:

- Configure Windows 11 network settings
- Troubleshoot network connectivity issues
- Troubleshoot name resolution issues
- Describe remote access options
- Configure and troubleshoot VPNs

## Module 6: Troubleshooting Group Policy

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

### Lessons

- Overview of Group Policy
- Resolving client-configuration failures and GPO application issues

### Lab 1: Troubleshooting Group Policy

- Troubleshoot the application of GPOs on client devices

After completing this module, students will be able to:

- Describe Group Policy
- Resolve GPO application issues on client devices

## Module 7: Configuring and Troubleshooting Security Settings

This module describes various security settings in Windows 11, including Credential Guard, Exploit Guard, and Application Guard. Windows Hello authentication is also covered, in addition to common sign-in issues, how to detect them, and how to troubleshoot these issues. The module also explains ways to secure the startup environment, including Secure Boot and related technologies.

### Lessons

#### Overview of:

- Secure Boot, Trusted Boot, Measured Boot
- UEFI settings
- TPM requirements
- Implementing network security with Windows Defender Firewall and Windows Defender Firewall with Advanced Security
- Implementing Credential Guard, Exploit Guard, and Application Guard
- Configuring Windows Hello
- Troubleshooting sign-in issues

### Lab 1: Configuring and Troubleshooting Security Settings

- Resolve a sign-in issue

After completing this module, students will be able to:

- Describe Windows startup security
- Implement Windows Defender Firewall
- Describe Windows 11 security settings
- Configure Windows Hello
- Troubleshoot Windows 11 sign-in

## Module 8: Configuring and Troubleshooting User State

This module provides guidance on configuring and troubleshooting user state synchronization in an on-premises network. This includes managing roaming profiles, UE-V, and folder redirection.

### Lessons

- Troubleshooting the application of user settings
- Configuring and troubleshooting UE-V
- Configuring and troubleshooting Folder Redirection

### Lab 1: Configuring and Troubleshooting User State

- Configure UE/V
- Configure Folder Redirection
- Troubleshoot Folder Redirection

After completing this module, students will be able to:

- Describe user state
- Configure UE-V
- Configure Folder Redirection

## Module 9: 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 recovery in Windows 11.

**Lessons**

- Troubleshooting file permissions issues
- Troubleshooting issues with printers
- Performing File Recovery in Windows 11

**Lab 1: Configuring and Troubleshooting Resource Access**

- Resolve a file access issue
- Troubleshoot printing
- Recover files

After completing this module, students will be able to:

- Troubleshoot file permissions issues
- Troubleshoot printing
- Describe file synchronization
- Perform file recovery

**Module 10: Troubleshooting applications**

This module explains how to troubleshoot common desktop application operations issues. It also describes the Universal Windows apps and the Microsoft Store. The module also explains how to resolve issues related to Application Control and AppLocker policies. Finally, the module covers how to enable and configure Kiosk mode.

**Lessons**

- Troubleshooting desktop apps
- Managing Universal Windows apps
- Overview of Application Control
- Troubleshooting AppLocker Policy application
- Troubleshooting application compatibility Issues
- Configuring Kiosk mode

**Lab 1: Troubleshooting applications**

- Troubleshoot AppLocker
- Provision a kiosk device

After completing this module, students will be able to:

- Troubleshoot desktop app deployment
- Manage Universal Windows apps
- Describe Application Control
- Describe AppLocker
- Troubleshoot application compatibility issues
- Configure a kiosk device

**Module 11: Maintaining Windows 11**

This module describes how to identify performance issues in Windows 11. It also explains how to manage and troubleshoot Windows updates.

**Lessons**

- Monitoring and troubleshooting Computer Performance
- Overview of Windows Update
- Configuring Windows Update for Business
- Troubleshooting Windows updates

**Lab 1: Maintaining Windows 11**

- Review computer performance
- Configure Windows Update

After completing this module, students will be able to:

- Describe performance monitoring
- Describe Windows Update
- Troubleshoot Windows updates