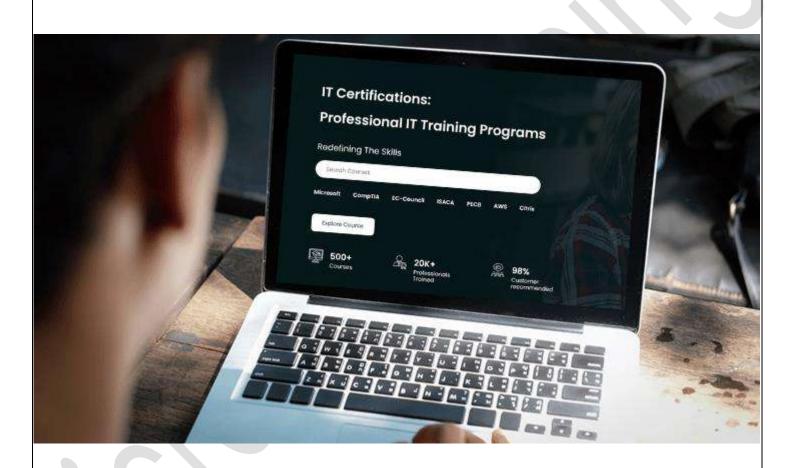


Redefining The Skills



# 50331: WINDOWS CLIENT, ENTERPRISE SUPPORT TECHNICIAN TRAINING

**Duration: 3 Days** 



## **Course Description**

This course is updated for Windows 10 and Windows Server 2016.

Windows Client, Enterprise Support Technician training course is a three-day instructor-led course that gives you the knowledge and skills needed to document, isolate and resolve issues on Windows Desktops on a corporate domain.

This material is prepared for the corporate IT technicians that support Windows 10 and old clients. Other resources are now included with the materials that support them to recreate the environment on their network or Virtual Machines in Microsoft Azure.

This course is based on the objectives of 50331D.

#### **Training Exclusives**

- Live instructor-led interactive sessions with Microsoft Certified Trainers (MCT).
- Access to Microsoft Official Courseware (MOC).
- Real-time Virtual Lab Environment.
- Experience 24\*7 Learner Support.
- Self-paced learning and flexible schedules.

#### Who should attend this course?

- This course is intended for technicians that support Windows 7, 8 or 10 devices. Tier 1 and 2 problems are the focus of this material.
- Windows PowerShell and Azure PowerShell tutorials and labs are now a part of the course.

## What you will learn

- Manage and Maintain Windows devices locally or remotely
- Manage Windows devices using a GUI or a command-line interface
- Identify the Cause of and Resolve Networking Issues
- Identify the Cause of and Resolve Security Issues
- Manage Windows devices locally or remotely
- Manage Windows Clients with Windows PowerShell & Azure PowerShell

# **Prerequisites**

- TCP/IP Troubleshooting skills
- Experience working in a corporate domain environment
- Experience using GUI and command-line troubleshooting tools
- Experience installing and troubleshooting applications

#### **Curriculum**

## Module 1: Identify and Resolve New Software Installation Issues (Required)

This module explains how to fix problems that occur during the installation of new software.

- Overview
- Planning New Software Deployment



- Multilingual Deployment
- Using Group Policy to install software
- Using Software Restriction Policies
- Digitally Signing Software
- Using WMI
- Using Applocker
- Using Virtualization for Testing
- Resolve Software Installation Issues
- Review

Labl: Identify and Resolve New Software Installation Issues

- Create a Repair Disk and Installation Partitions
- Install and Configure Windows
- Install Programs and test Applocker
- Configure Compatibility Settings

After completing this module, students will be able to:

- Understand the different installation options for Windows
- Understand the different installation options for Windows applications
- Resolve Windows installation problems
- Prevent users from running unapproved applications

# Module 2: Resolve Software Configuration Issues (Required)

This module explains how to fix application installation and configuration issues.

- Overview
- Change Default Settings on the Image
- Enable and Disable Features
- Pointing to a Network Resource
- Configuring Updates
- Resolve Configuration Issues with Group Policy
- Driver Updates
- Problem Steps Recorder
- Resolve Software Configuration Issues
- Review

Labl: Resolve Software Configuration Issues

- Install the Windows Automated Installation Kit
- Create a Windows PE bootable image
- Create a VHD disk
- Install Windows on a VHD
- Boot Windows from a VHD
- Use the Problem Steps Recorder

After completing this module, students will be able to:

- Create a Windows VHD disk
- Configure operating system features
- Understand the impact of Driver Updates
- Fix software configuration problems
- Use the Problem Steps Recorder tool

## Module 3: Resolve Software Failure (Required)



This module explains how to fix application problems that come up during their use and configuration.

- Overview
- Event Viewer
- Event Forwarding
- Application Compatibility Toolkit
- Windows Troubleshooting Platform
- Windows Experience Index
- Testing Compatibility with Safe Mode
- System Restore
- Resolve Software Failure
- Review

#### Labl: Resolve Software Failure

- Install applications written for older versions of Windows
- Use the Program Compatibility Tool to configure settings for older applications
- Use PowerShell scripts to configure Network Adapters
- Use the Troubleshooter to enable the network adapter
- Install Windows SDK
- Create a Troubleshooting Pack with the SDK
- Configure Event Forwarding
- Use System Restore

After completing this module, students will be able to:

- Configure Event Forwarding
- Use System Restore to fix desktop problems.
- Create a Windows Troubleshooter

## Module 4: Identify and Resolve Logon Issues (Required)

This module explains how to fix logon problems and configure local and roaming profiles.

- Overview
- Authentication Process
- Machine Accounts
- Trust Relationships
- Network Services
- User Account Properties
- User Profiles
- Resolve Logon Issues
- Review

## Labl: Identify and Resolve Logon Issues

- Join a computer to the domain
- Install Remote Server Administration Tools (RSAT)
- Test and Verify Domain User Account Properties
- Create Logoff script using PowerShell
- Test the use of Roaming Profiles
- Test the use of Mandatory Profiles

After completing this module, students will be able to:

- Create Roaming and Mandatory User Profiles
- Configure Machine Accounts in Active Directory
- Configure User Account Properties in Active Directory



# Module 5: Identify and Resolve Network Connectivity Issues (Required)

This module explains how to troubleshoot network and connectivity problems for client computers.

- Overview
- Scope of the Problem
- Hardware Issues
- TCP/IP Configuration
- Network Routing
- IPSec Configuration
- Network Connectivity Tools
- Branch Cache
- Resolve Network Connectivity Issues
- Review

Labl: Identify and Resolve Network Connectivity Issues

- Use command-line tools to identify and fix network connectivity problems
- Fix connectivity problems deliberately created by problem scripts

After completing this module, students will be able to:

- Use command-line tools to troubleshoot connectivity problems.
- Use the Windows Troubleshooters to fix configuration issues.
- Configure Advanced TCP/IP options on a client computer

#### Module 6: Identify and Resolve Name Resolution Issues (Required)

This module explains how to use network and local computer services to resolve IP and computer naming issues.

- Overview
- DNS Name Resolution
- Using a Hosts files
- WINS Configuration
- Using LMHOSTS files
- Name Resolution Order
- Manual vs DHCP Configuration
- Resolve Name Resolution Issues
- Review

Lab1: Identify and Resolve Name Resolution Issues

- Configure and Test DNS Resolution
- Configure and Test Hosts File Resolution
- Configure and Test NetBIOS Resolution

After completing this module, students will be able to:

- Configure records on a DNS Server
- Configure HOSTS records
- Use command-line and scripting tools to configure TCP/IP settings

## Module 7: Identify and Resolve Network Printer Issues (Optional)

This module explains how to implement printer configuration and security settings.

- Overview
- Connecting to a Network Printer
- Managing the Print Spooler



- Setting Printer Priorities
- Creating Printer Pools
- Configuring Drivers
- Printer Schedules
- Printer Permissions
- Manage Printers with Group Policy Settings
- Resolve Network Printer Issues
- Review

#### Lab1: Identify and Resolve Network Printer Issues

- Install local and network printers
- Create and use a separator page
- Configure Printer Redirection and Printer Pooling
- Move the Print Spooler Directory

#### After completing this module, students will be able to:

- Optimize the performance of the Print Spooler
- Redirect Print Jobs from non-functioning Printers
- Manage Active Directory registration of Printers
- Manage Printer Permissions

## Module 8: Identify and Resolve Performance Issues (Required)

This module explains how to improve the performance of a system by monitoring and controlling the use of computer resources. Methods of auditing and reporting the use of computer resources are also demonstrated.

- Overview
- Analyzing Event Logs
- Setting Power Management
- Optimize Processor Usage
- Optimizing Memory Usage
- Optimize Hard Drive Usage
- Optimize Network Usage
- Performance Tools
- Resolve Performance Issues
- Review

#### Labl: Identify and Resolve Performance Issues

- Schedule and Perform a Disk Defragmentation
- Using Task Manager
- Using Resource Monitor
- Display a message when a Service stops

## After completing this module, students will be able to:

- Configure automatic responses to Service failure
- Manage the use of Processing resources by applications
- View and control active connections to a computer
- Optimize Hard-Disk performance.

#### Module 9: Identify and Resolve Hardware Failure Issues (Optional)

This module explains how to diagnose hardware problems on a computer.

Overview



- Diagnosing Memory Failure Issues
- Hard Drive Issues
- Network Card Issues
- Power Supply Issues
- Windows Hardware Diagnostic Tools
- Resolve Hardware Failure Issues
- Review

## Labl: Identify and Resolve Hardware Failure Issues

- Use the Windows Memory Diagnostics Tool
- Fix Hard Disk Errors
- Use the Reliability Monitor
- Use Event Viewer to Find Hardware Information

#### After completing this module, students will be able to:

- Understand how to be proactive in dealing with hardware problems
- Use Windows hardware diagnostic tools

## Module 10: Identify and Resolve Wireless Connectivity Issues (Optional)

This module explains how to configure reliable and secure wireless connectivity for client computers.

- Overview
- Signal Strength
- Wireless Security
- Wireless Profiles
- Management Options for Wireless Devices
- Resolve Wireless Connectivity Issues
- Review

## Labl: Identify and Resolve Wireless Connectivity Issues

• No lab exercises. (Interative Video Simulation is provided to practice this skill.)

After completing this module, students will be able to:

- Understand the encryption options available for wireless networks
- Use Windows Wireless security options
- Fix wireless client connectivity problems

#### Module 11: Identify and Resolve Remote Access Issues (Optional)

This module explains how to configure remote network connections for client computers.

- Overview
- Remote Access Methods
- Dial-up Configuration
- VPN Configuration
- DirectAccess Configuration
- Authentication Protocols
- Resolve Remote Access Issues
- Review

#### Labl: Identify and Resolve Remote Access Issues

- Configure Remote Access settings for a domain user account
- Create and Test a VPN Connection



After completing this module, students will be able to:

- Understand the security options available when creating remote access connections
- Understand the new capabilities of VPN connections that use DirectAccess
- Resolve connectivity problems for VPN and Dial-Up connections

#### Module 12: Manage File Synchronization (Required)

This module explains how to allow end-users to work with network files that are being synchronized on their local devices.

- Overview
- Configuring Offline File Access
- Synchronization Settings
- Transparent Caching
- Roaming Profiles
- Restoring Network Files
- Resolve File Synchronization Problems
- Review

## Labl: Manage File Synchronization

- Configure and Test Offline Files
- Restore the Previous Version of a File

#### Lab2: Manage File Synchronization

- Configure and Test Offline Files
- Restore the Previous Version of a File

After completing this module, students will be able to:

- Configure Transparent Caching
- Restore deleted network files

## Module 13: Identify and Resolve Internet Explorer Security Issues (Optional)

This module explains how to configure the security features in Internet Explorer to protect user information and privacy

- Overview
- Configure Security Zone
- Configure Security Levels
- Configure Privacy Settings
- Managing Add-ons
- Configure Smart Screen Filter
- Other Security Issues
- Resolve Internet Explorer Security Issues
- Review

## Labl: Identify and Resolve Internet Explorer Security Issues

- Configure Trusted Security Zone
- Configure the Security and Privacy Features in IE
- Configure Group Policy Settings for Internet Explorer

After completing this module, students will be able to:

- How to use new security features like Smart Screen Filtering
- Manage Internet Explorer Add-ons



• Use IE features to warn the user about potential security problems

## Module 14: Identify and Resolve Firewall Issues (Optional)

This module explains how to configure Windows Firewall to secure application and network traffic on a computer.

- Overview
- Securing Network Applications and Features
- Program & Port Exceptions
- Configuring Notifications and Logging
- Network Security Tools
- Resolve Firewall Issues
- Review

Labl: Identify and Resolve Firewall Issues

- Configure and Test Firewall Rules for an application
- Fix Application Problems Caused by Firewall Rules

After completing this module, students will be able to:

- Block / Allow application communication over the network
- Audit and record unapproved network communication with a Windows device
- Fix problems caused by improper configuration of Windows Firewall

## Module 15: Identify and Resolve Issues Due To Malicious Software (Optional)

This module explains how to restore a computer system after an attack by viruses or other malicious software.

- Overview
- Proactive Malware Protection
- Protecting Internet Explorer
- Windows and Anti-Virus Updates
- Recovering From Malware Infection
- Resolve Issues Due To Malicious Software
- Review

Labl: Identify and Resolve Issues Due To Malicious Software

- Use the Action Center to manage UAC settings
- Use System File Checker
- Use the Malicious Software Removal Tool
- Install Microsoft Security Essentials

After completing this module, students will be able to:

- Identify problems caused by viruses and other malware.
- How to protect Internet Explorer and E-mail applications from malware attack
- How to prevent data loss and fix a computer after a malware attack
- Install and configure Microsoft Security Essentials

#### Module 16: Identify and Resolve Encryption Issues (Optional)

This module explains how to configure data encryption options available on Windows devices and troubleshoot problems related to it.

- Overview
- Configuring a Recovery Agent



- Using EFS
- Using BitLocker
- Encryption Tools
- Resolve Encryption Issues
- Review

Labl: Identify and Resolve Encryption Issues

- Encrypt Files using EFS
- Configure EFS Sharing
- Configure a Recovery Agent

After completing this module, students will be able to:

- Recover from lost encryption keys
- How to encrypt individual files using EFS
- Use BitLocker to protect laptops and insecure computers

## Module 17: Identify and Resolve Software Update Issues (Optional)

This module explains how to configure and use the operating system and application update features available on Windows devices.

- Overview
- Types of Windows Updates
- Using Windows Update
- Using Microsoft Update
- Resolve Software Update Issues
- Review

Lab1: Identify and Resolve Software Update Issues

- Configure Windows Updates using desktop settings
- Configure Windows Updates using Group Policy settings

After completing this module, students will be able to:

- Configure client computers to get updates from the local network instead of the Internet
- Understand the different options available when updating the operating system
- Understand how to configure automatic updates for Microsoft applications

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