

Windows Client, Enterprise Desktop Support Technician

Module 1: Identify and Resolve New Software Installation Issues

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

Lessons

- 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

Lab 1: 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.

Lessons

- 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

Lab 1: 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.

Lessons

- 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

Lab 1: 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.

Lessons

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

Lab 1: 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.

Lessons

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

- Review

Lab 1: 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.

Lessons

- 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

Lab 1: 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.

Lessons

- 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

Lab 1: 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.

Lessons

- 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

Lab 1: 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.

Lessons

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

Lab 1: 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.

Lessons

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

Lab 1: Identify and Resolve Wireless Connectivity Issues

- No lab exercises. (Interactive 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.

Lessons

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

Lab 1: 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.

Lessons

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

Lab 1: Manage File Synchronization

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

Lab 2: 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.

Lessons

- 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

Lab 1: 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.

Lessons

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

Lab 1: 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.

Lessons

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

Lab 1: 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.

Lessons

- Overview
- Configuring a Recovery Agent
- Using EFS
- Using BitLocker
- Encryption Tools
- Resolve Encryption Issues
- Review

Lab 1: 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.

Lessons

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

Lab 1: 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

Module 18: PowerShell for Desktop Support Technicians (Appendix B)

This module explains how to use PowerShell for information gathering and troubleshooting tasks.

Lessons

- Overview
- Compared to other Scripting Languages
- Creating and Running Scripts
- Administering Local Resources
- Administering Network Resources
- Connect to Microsoft Azure with PowerShell
- Review

Lab 1: PowerShell for Desktop Support Technicians

- Use PowerShell to get System Information and change Computer Settings
- Use PowerShell documentation to understand and use Cmdlets
- Create and Execute Scripts
- Configure and Test remote device configuration
- Create an Azure VM with Azure PowerShell

After completing this module, students will be able to:

- Extract system information and modify computer settings using PowerShell
- Use PowerShell help features to learn cmdlet options
- Create and execute PowerShell scripts
- Remotely administer Windows devices using PowerShell
- Create Microsoft Azure Virtual Machines with Azure PowerShell