

M55345A - Implementing and Managing Windows 11

DURATION

5 Days

LEVEL

200 - Intermediate

VENDOR

Microsoft, Windows Client, Windows 10/11

LEGACY MOC CODE

M20697-1B

COURSE OVERVIEW

This is a 5-day ILT course designed to provide you with the knowledge and skills required to install and configure Windows 11 desktops and devices in an on-premises Windows Server Active Directory domain environment. The skills you gain by attending this course include:

- Learning how to install and customize Windows 11 operating systems and apps
- Configuring local and remote network connectivity and storage.

You'll also learn how to:

- Configure data security, device security, and network security
- Maintain, update, and recover Windows 11.

Note: This course is also backwards compatible with Windows 10 as many of the technologies and principles remain the same.

Labs available from go deploy.

AUDIENCE PROFILE

This course is aimed at IT professionals who support Windows 11 desktops, devices, users, and associated network and security resources. The secondary audience for this course is Desktop/Device Support Technicians (DSTs) who provide Tier 2 support to users with computers that are running the Windows 11 operating system (OS) in a on-premises environment.

COURSE OUTLINE

Module 1: Installing Windows 11

This module describes the new features of Windows 11. The module also lists the hardware requirements for Windows 11 and describes the interactive installation process. The module then goes on to explain the various deployment options that could also be used in larger networks. The module also includes a review of the new user interface.

- Introducing Windows 11
- Choosing an edition of Windows 11
- What's new in Windows 11 since Windows 10?
- Navigating the user interface
- Overview of installation options
 - o What is OOBE?
 - o Provisioning packages during OOBE
 - o Autopilot
 - o Local interactive installation
 - o Deployment options:
 - o Windows ADK
 - o MDT
 - o Configuration Manager
 - o Installing Windows 11
 - o Hardware requirements
 - o Licensing and activation options

After completing this module, students will be able to:

- Describe Windows 11 features
- Choose an appropriate Windows 11 edition
- Describe important new features in Windows 11
- Navigate the user interface
- Describe installation and deployment options

Lab: Installing Windows 11:

- Install Windows 11

Module 2: Upgrading and updating Windows 11

This module describes the various upgrade and migration options available for installers. It also discusses how to migrate user state following an upgrade or migration. In the second half of the module, students learn how to manage Windows 11 updates.

- Upgrading to Windows 11
 - o In-place upgrades

- o Side-by-side migration
- o Wipe and load migration
 - Migration user state
 - Managing Windows 11 updates
- o Overview of Windows Update
- o Configuring Windows Update for Business
- o Troubleshooting Windows updates

After completing this module, students will be able to:

- Compare upgrade and migration
- Migrate user state
- Manage Windows 11 updates

Lab: Upgrading and updating Windows 11:

- Perform an upgrade from Windows 10
- Migrate user state from Windows 10
- Configure and manage Windows 11 updates

Module 3: Configuring Windows 11 devices

This module explains how to complete typical post-installation configuration options for Windows 11. Students also learn how to use both the Settings app and Control Panel to complete typical installation tasks.

- Overview of Windows 11 configuration tools:
 - o The Settings app and Control Panel
 - o Remote options, including: Quick Assist, Windows Admin Center and Windows PowerShell
- Common configuration options
- Managing activation

After completing this module, students will be able to:

- Select the appropriate configuration tool
- Perform common configuration tasks
- Manage activation

Lab: Configuring Windows 11 devices:

- Configure Windows 11 devices with Windows Admin Center
- Configure Windows 11 devices with Windows PowerShell

Module 4: Configuring network connectivity

This module provides guidance on configuring network settings, including how to set up and manage a VPN.

- Configuring IP network connectivity, including an overview of subnet addressing
- Implementing name resolution
- Managing wired and wireless networks
- Overview of Remote Access

After completing this module, students will be able to:

- Configure network settings
- Implement name resolution
- Describe remote access options

Lab: Configuring network connectivity:

- Configure IPv4 settings
- Configure and test name resolution
- Configure a VPN

Module 5: Managing storage

This module describes a typical disk configuration for a Windows 11 computer. The module then provides guidance on how to manage both local storage, and how to configure access to remote storage, such as OneDrive. Students also learn how to enable and configure Storage Spaces.

- Overview of local storage and network storage options
- Description of a typical disk configuration
 - o Single SSD with three partitions: EFI System, Boot, and Windows Recovery
 - o Explanation as to when additional storage might be added, such as managing memory sticks
- Overview of Microsoft terminology relating to disks, partitions, and volumes
- Using Disk Management and Diskpart.exe
- Managing Storage Spaces
- Accessing remote storage:
 - o Shared folders on on-premises file servers
 - o OneDrive for Business

After completing this module, students will be able to:

- Describe typical storage configurations
- Manage disks, volumes, and partitions
- Create a storage space
- Access shared folders

Lab: Managing storage:

- Create a storage space

Module 6: Managing files and printers

This module provides an overview of supported file systems, and explains use-case scenarios for each. Students then learn how to configure and manage access to shared files, how to implement file synchronization using Work Folders, and how to manage printer access.

- Overview of File Systems:
 - o FAT, NTFS, and ReFS
- Configuring and managing file access
 - o File and folder permissions

- o Effective access
 - Configuring and managing shared folders
- o Combining shared folder and local NTFS permissions
 - Implementing Work Folders
 - Managing printers

After completing this module, students will be able to:

- Describe file systems
- Manage file access
- Manage shared folders
- Implement Work Folders
- Manage printers

Lab: Managing files and printers:

- Manage files and folders
- Configure file permissions
- Share folders
- Implement Work Folders
- Manage printers

Module 7: Managing apps in Windows 11

This module describes how to deploy apps to Windows 11 devices. Students also learn how to troubleshoot apps. Finally, the module also discusses how to configure Microsoft Edge browser settings.

- Overview of methods used to provide apps to users:
 - o Deploy as part of image
 - o Deploy with Configuration Manager
 - o Deploy using Intune
- The Microsoft Store
 - o Enabling/restricting access
 - Configuring Microsoft Edge settings
 - o Sync settings
 - o Extensions

After completing this module, students will be able to:

- Choose how to deploy apps to user devices
- Configure access to the Microsoft Store
- Configure Microsoft Edge settings

Lab: Managing apps in Windows 11:

- Restrict access to the Microsoft Store
- Configure Edge browser settings

Module 8: Implementing and managing security

This module outlines common security threats and available mitigations. Students then learn to configure user and group

accounts and User Account Control (UAC) settings. The module also discusses data security issues, and then provides a description of available technologies that can help mitigate those threats, including Credential Guard, Exploit Guard, and BitLocker. Finally, the module explores ways that students can help secure network traffic.

- Managing User Accounts
 - o Types of accounts: local, domain, online
 - o Groups, including built-in and strategies for using Global, Universal, and Domain Local groups
- Configuring User Account Control
- Overview of data-related security threats
- Implementing and managing BitLocker
- Windows Security app
- Using security settings to mitigate threats:
 - o Overview of Credential Guard, Exploit Guard
- Overview of network-related security threats and mitigations
 - o Windows Defender Firewall
 - o Connection Security Rules

After completing this module, students will be able to:

- Manage local accounts
- Configure UAC
- Implement BitLocker
- Describe Windows 11 security settings and features
- Describe common security threats and available mitigations

Lab: Implementing and managing security:

- Create local user and group accounts
- Configure local security policy settings
- Implement BitLocker
- Configure Windows Defender Firewall rules and Connection Security Rules

Module 9: Monitoring Windows 11

This module helps students identify performance-related problems with Windows 11 computers. Students also learn how to implement monitoring, including how to access and interpret event log data.

- Monitoring Windows 11
- Overview of performance monitoring tools
- Optimizing performance

After completing this module, students will be able to:

- Describe available monitoring options in Windows 11
- Describe how to identify performance problems
- Manage workloads and computer resources to optimize performance

Lab: Monitoring Windows 11

- Use Performance Monitor and Resource Monitor

Module 10: Troubleshooting Windows 11

This module explores how to troubleshoot issues related to hardware devices and device drivers. It also covers how to recover Windows 11 computers that won't start, or start with errors. Students also learn how to recover files.

- Managing Windows 11 startup
- Recovering Windows 11
- Managing devices and drivers
- Understanding the registry
- Recovering files

After completing this module, students will be able to:

- Describe Windows 11 startup
- Explain how to recover Windows 11 computers
- Describe devices and device drivers
- Configure the Windows 11 registry
- Recover files

Lab: Troubleshooting Windows 11:

- Use Windows RE to check the startup environment
- Perform a System Restore from within Windows RE
- Roll back a driver
- Recover deleted files