1. MD-100 - Windows 10

Module 1: Installing Windows

This module covers installing the Windows 10 OS. Students will learn the different editions of Windows 10, requirements, and new features introduced. This module covers how to install the OS, as well as methods for migrations and upgrading. Students will also learn about common tools used in the deployment proces

Lessons

- Introducing Windows 10
- Installation Options
- Requirements for Windows Features
- Installation Process and Media
- Upgrading to Windows 10

Lab : Installing Windows 10

- Upgrading Windows 7 to Windows 10
- Migrating User Settings

After completing this module, students will be able to:

- Understanding the different editions and features of Windows 10.
- Understand the Windows 10 client installation options.
- Practice installing Windows 10 using an online virtual machine.

Module 2: Updating Windows

In this module, Students will learn about keeping Windows 10 up-to-date. Students will be introduced to the new Windows servicing model and how it applies to various scenarios. Students will learn the various different methods for updating Windows and applications, as well as managing updates using tools like group policy and Windows Update for Business.

Lessons

- Windows Servicing Model
- Updating Windows
- Applying Applications and Windows Updates

Lab : Updating Windows 10

- Configuring Updates for a Single Device
- Configuring Updates with GPOs

After completing this module, students will be able to:

- Describe the Windows servicing model.
- Configure Windows update settings.
- Describe updating Windows using WSUS.
- Describe updating Windows using Windows Update for Business.
- Configure Windows update using group policy.

Module 3: Post-installation Configuration and Personalization

This module covers common post-installation tasks in Windows 10. Students will learn how to customize the user interface, as well as using the control panel and settings app to configure common OS settings. This course will also introduce students to Windows PowerShell.

Lessons

- Customize the Windows 10 UI.
- Configure device specific settings such as power plans and mobile device options.
- Use the Windows control panel and setting app to configure settings.
- Describe using Windows PowerShell.

Lab : Configuring Windows 10

- Using the Settings App
- Using Control Panel Using Control Panel
- Using Windows PowerShell

After completing this module, students will be able to:

- Customize the Windows 10 UI
- Configure device specific settings such as power plans and mobile device options.
- Use the Windows control panel and setting app to configure settings.
- Describe using Windows PowerShell.

Module 4: Course Conclusion

Lessons

- Final Exam

Lab : Graded Lab

Module 5: Configuring Peripherals and Drivers

This module will cover device configuration. Students will learn how device drivers work and how to install them. Students will also be introduced to managing and configuring hardware peripherals such as printers.

Lessons

- Managing Devices and Drivers
- Managing Printers

After completing this module, students will be able to:

- Describe concepts related to drivers.
- Install a device driver.
- Describe printer management concepts.
- Configure client-side printing and managing print server properties.

Module 6: Configuring Networking

In this module, Students will learn about networking concepts. This module will introduce to IPv4 and IPv6, and concepts like DNS. Students will learn how to configure network settings in Windows, as well as learn about wireless network technologies. The module will conclude with methods of managing Windows remotely.

Lessons

- Configure IP Network Connectivity
- Implement Name Resolution
- Implement Wireless Network Connectivity
- Remote Access Overview
- Remote Management

After completing this module, students will be able to:

- Describe the different types of applications.

- Install applications manually and using automated methods.
- Manage application deployment using the Windows Store.
- Learn about web browser features in Windows 10.

Module 7: Configuring Storage

This module covers storage configuration and management in Windows 10. Students will be introduced to local, cloud and virtual storage options. This course will also cover configuring storage on client devices and introduce storage spaces.

Lessons

- Overview of storage options
- Using OneDrive
- Managing Disks, Partitions, and Volumes
- Maintaining Disks and Volumes
- Managing Storage Spaces

Lab : Practice Lab: Managing Storage

- Adding a Disk
- Creating a Simple Volume
- Compressing a Folder
- Enabling Disk Quotas
- Creating a Storage Space

After completing this module, students will be able to:

- Describe the options and benefits of local, cloud, and virtual storage.
- Configure OneDrive.
- Configure local disk partitions and volumes.
- Describe the capabilities and benefits of Storage spaces.

Module 8: Managing Apps in Windows 10

In this module, Students will be introduced to App management in Windows 10. This module will cover the different types of apps and supported installation methods. Students will learn how to install apps using manual and automated methods, as well as manage app delivery using the Windows Store. Finally, this module will cover the differences between Internet Explorer and Microsoft Edge.

Lessons

- Providing Apps to Users
- Managing Universal Windows Apps
- The Windows Store
- Web browsers in Windows 10

After completing this module, students will be able to:

- Describe the different types of applications.
- Install applications manually and using automated methods.
- Manage application deployment using the Windows Store.
- Learn about web browser features in Windows 10.
- Module 5: Course Conclusion

Lessons

- Final Exam
- Lab : Graded Lab

Module 9: Configuring Authorization & Authentication

This module introduces the tools and features of Windows 10 for authorizing access to Windows 10 clients. Students will learn about methods for how users sign-in to Windows 10. This module also covers restricting what users can or cannot do on a device through methods like UAC and account types.

Lessons

- Using Security Settings to Mitigate Threats
- Configuring User Account Control
- Implementing Device Registration
- Authentication

After completing this module, students will be able to:

- Describe the different methods for securing data and the Windows 10 OS.
- Describe the different types of user and service accounts.
- Configure Windows Hello.
- Configure user account control.

Module 10: Configuring Data Access and Usage

In this module, Students will learn about permissions. This module will cover considerations for different files systems. Students will learn how to configure file and folder permissions as well as shared folders. The module will conclude with configuring settings through methods such as local and group policy.

Lessons

- Overview of File Systems
- Configuring and Managing File Access
- Configuring and Managing Shared Folders
- Managing Security with Policies

Lab : Configuring and Managing Permissions and Shares

- Creating, Managing, and Sharing a Folder
- Using Conditions to Control Access and Effective Permissions

After completing this module, students will be able to:

- Describe the differences and benefits of supported file systems.
- Configure file and folder permissions.
- Configure shared folders.
- Secure Windows through local policy settings.

Module 11: Configuring Threat Protection

This module introduces students to protecting devices from external threats. Students will learn about the different types of common threats. This module will teach students about using encryption, firewalls, and IPSec to help protect against threats. The module will conclude with how to configure and use Windows Defender and AppLocker.

Lessons

- Malware and Threat Protection
- Windows Defender
- Connection Security Rules
- Advanced Protection Methods

Lab : Practice Lab: Managing Network Security

- Creating and Testing Inbound Rules
- Creating and Testing Outbound Rules
- Creating and Testing Connection Security Rules
- Configuring Windows Defender

After completing this module, students will be able to:

- Identify common security threats
- Describe the methods by which you can mitigate these common security threats.
- Describe the different methods of encryption.
- Describe how Windows firewall can secure the device.
- Describe the benefits of using IPSec.
- Describe the different features of Windows Defender.
- Describe the benefits of using AppLocker.
- Module 4: Course Conclusion

Lessons

- Final Exam

Lab : Graded Lab

Module 12: Supporting the Windows 10 Environment

This module will cover the Windows 10 architecture and common environments. Students will be introduced to the various tools used in maintaining Windows. This module will also discuss methodologies for effectively troubleshooting issues and how to proactively manage and optimize Windows 10.

Lessons

- Troubleshooting Windows
- Troubleshooting Tools

Lab : Practice Lab: Monitoring Windows 10

- Monitoring Events
- Monitoring Reliability and Performance

After completing this module, students will be able to:

- Describe the Windows architecture.
- Describe key stages in troubleshooting.
- Describe the purpose and benefits of the various tools in Windows.
- Use monitoring tools to establish a performance baseline.
- Optimize performance on Windows 10 clients.

Module 13: Troubleshooting the Windows OS

In this module, Students will learn how to troubleshoot startup and service issues related to the operating system. This module will teach the different startup and recovery options, and how to troubleshoot different Windows services.

Lessons

- Troubleshooting Windows Startup
- Troubleshooting Operating System Service Issues
- Troubleshooting Sign-In Issues

After completing this module, students will be able to:

- Describe the various methods identifying and recovering from startup issues.

- Describe when to use the various advanced startup options.
- Identify and disable a failed service
- Identify and mitigate common locked account scenarios.

Module 14: Troubleshooting Files & Applications

This module helps students plan for file backup and recovery. Students will learn how to plan and configure data protection strategies and how to perform various file and system recovery methods. This module also includes common methods for troubleshooting application installation issues, compatibility issues, and resolving browser issues.

Lessons

- File Recovery in Windows 10
- Application Troubleshooting

Lab : Troubleshooting Desktop Apps

- Troubleshooting AppLocker Policy Applications
- Troubleshooting Application Compatibility Issues
- Troubleshooting Microsoft Internet Explorer Issues
- Troubleshooting Microsoft Edge Issues

After completing this module, students will be able to:

- Describe the different methods of file recovery.
- Configure Windows 10 to support individual file and system recovery.
- Recover a device using the Reset This PC function.
- Solve application compatibility issues with the Application Compatibility Toolkit.
- Troubleshoot common browser issues.

Module 15: Troubleshooting Hardware and Drivers

This module introduces hardware troubleshooting. Students will learn about driver management and how to troubleshoot devices. Students will also learn steps for troubleshooting system hardware and external peripherals such as USB drives and printers, including diagnostic methods and remediation.

Lessons

- Troubleshooting Device Driver Failures
- Overview of Hardware Troubleshooting
- Troubleshooting Physical Failures

Lab : Troubleshooting Device Driver Issues

- Troubleshooting a Missing Device Driver
- Resolving Hardware Problems
- Resolving device driver problem
- Configuring Group Policy Settings to Control Device Installation

After completing this module, students will be able to:

- Troubleshoot and remediate driver issues.
- Troubleshoot Peripherals
- Diagnose and replace hardware.

Module 16: Course Conclusion

Lessons

- Final Exam

Lab : Graded Lab

2. MD-101 - Managing Modern Desktop

Module 1: Planning an Operating System Deployment Strategy

This module explains how to plan and implement a deployment strategy. It covers various methods and scenarios for deploying Windows. It discusses on-premise and cloud technologies as well as considerations for new deployments, upgrading, and migrations.

Lessons

- Overview of Windows as a service
- Windows 10 Deployment options
- Considerations for Windows 10 deployment

Lab : Practice Lab - Planning Windows 10 deployment

After completing this module, students will be able to:

- Describe Windows as a Service.
- Describe the different methods for deployment.
- Understand the differences between on-premise and cloud-based solutions.
- Describe methods of dynamic provisioning.
- Describe the different tools available in the Windows Assessment and Deployment Kit.
- Describe the scenarios and limitations for in-place upgrades and migrations.

Module 2: Implementing Windows 10

This module covers new modern methods for deploying Windows 10 such as Windows Autopilot and provisioning packages. This module also covers tool used in upgrade planning, application compatibility and migration methods.

Lessons

- Implementing Windows 10 by using dynamic deployment
- Implementing Windows 10 by using Windows Autopilot
- Upgrading devices to Windows 10

Lab : Practice Lab - Implementing Windows 10

- Creating and deploying provisioning package
- Migrating user settings
- Deploying Windows 10 with AutoPilot

After completing this course, learners should be able to:

- Develop an Operating System deployment and upgrade strategy
- Understand the different methods of deployment.
- Understand which scenarios on-premise and cloud-based solutions can be used for.
- Deploy and migrate desktops to Windows 10.
- Plan and configure Windows Update policies.

Module 3: Managing Updates for Windows 10

This module covers managing updates to Windows. This module introduces the servicing options for Windows 10. Students will learn the different methods for deploying updates and how to configure windows update policies.

Lessons

- Updating Windows 10
- Windows Update for Business

- Introduction to Windows Analytics

Lab : Practice Lab - Managing Updates for Windows 10

- Manually configuring Windows Update settings
- Configuring Windows Update by using GPOs

After completing this module, students will be able to:

- Describe the Windows 10 servicing channels.
- Configure a Windows update policy using Group Policy settings.
- Configure Windows Update for Business to deploy OS updates.
- Use Windows Analytics to assess upgrade readiness and update compliance.

Module 4: Course Conclusion

Lessons

- Final Exam

Lab : Graded Lab

After completing this module, students will be able to:

- Create a provisioning package.
- Configure an Autopilot deployment.
- Describe the tools used for planning upgrades and migrations.
- Describe the methods used to migrate user data.

Module 5: Device Enrollment

In this module, students will examine the benefits and prerequisites for co-management and learn how to plan for it. This module will also cover Azure AD join and will be introduced to Microsoft Intune, as well as learn how to configure policies for enrolling devices. The module will conclude with an overview of device inventory in Intune and reporting using the Intune console, Power BI and Microsoft Graph.

Lessons

- Device management options
- Manage Intune device enrollment and inventory

Lab : Practice Lab - Device Enrollment and Management

- Installing the MDM Migration Analysis Tool (MMAT)
- Obtain Intune and Azure AD Premium licenses and enable device management
- Enrolling devices in Intune
- Managing devices in Intune
- Creating device inventory reports

After completing this module, students will be able to:

- Describe benefits and methods for migrating to co-management.
- Deploy an MDM with Microsoft Intune.
- Configure device enrollment.
- Enroll desktop and mobile devices in Windows Intune.
- Configure and downloads inventory reports.

Module 6: Configuring Profiles

This module dives deeper into Intune device profiles including the types of device profiles and the difference between built-in and custom profiles. The student will learn about assigning profiles to Azure AD groups and monitoring devices

and profiles in Intune. The module will conclude with an overview of using Windows Analytics for health and compliance reporting.

Lessons

- Configuring device profiles
- Managing user profiles
- Monitoring devices

Lab : Practice Lab - Managing profiles

- Configuring roaming user profiles and Folder Redirection
- Create and deploy device profile based on the scenario
- Change deployed policy and monitor user and device activity
- Configuring Enterprise State Roaming

After completing this module, students will be able to:

- Describe the types of device profiles.
- Create and assign device profiles.
- Configure user profile and folder redirection.
- Monitor and report on devices using Intune and Windows Analytics.

Module 7: Application Management

In this module, students learn about application management on-premise and cloud-based solutions. This module will cover how to manage Office 365 ProPlus deployments in Intune as well as how to manage apps on non-enrolled devices. The module will conclude with an overview of Enterprise Mode with Internet Explorer and Microsoft Edge and tracking your installed applications, licenses, and assigned apps using Intune.

Lessons

- Implement Mobile Application Management (MAM)
- Deploying and updating applications
- Administering applications

Lab : Practice Lab - Managing Applications

- Deploying apps by using Intune
- Configure and deploy Office 365 ProPlus from Intune
- Configure mobile application management (MAM) policies in Intune

After completing this module, students will be able to:

- Describe the methods for application management.
- Deploy applications using Intune and Group Policy.
- Configure Microsoft Store for Business.
- Deploy Office365 ProPlus using Intune.
- Manage and report application inventory and licenses.
- Configure Internet Explorer Enterprise Mode.

Module 8: Course Conclusion

Lessons

- Final Exam

Lab : Graded Lab

After completing this module, students will be able to:

- Describe the types of device profiles.

- Create and assign device profiles.
- Configure user profile and folder redirection.
- Monitor and report on devices using Intune and Windows Analytics.

Module 9: Managing Authentication in Azure AD

In this module, students well be introduced to the concept of directory in the cloud with Azure AD. Students will learn the similarities and differences between Azure AD and Active Directory DS and how to synchronize between the two. Students will explore identity management in Azure AD and learn about identity protection using Windows Hello for Business, as well as Azure AD Identity Protection and multi-factor authentication. The module will conclude with securely accessing corporate resources and introduce concepts such as Always On VPN and remote connectivity in Windows 10.

Lessons

- Azure AD Overview
- Managing identities in Azure AD
- Protecting identities in Azure AD
- Managing device authentication
- Enabling corporate access

Lab : Practice Lab - Managing objects and authentication in Azure AD

- Enabling and configuring Azure AD Premium with Enterprise Mobility + Security (EMS) tenant
- Creating user and group objects with UI and Windows PowerShell
- Configuring Self-service password reset (SSPR) for user accounts in Azure AD
- Joining a device to Azure AD

After completing this module, students will be able to:

- Describe the capabilities of Azure AD.
- Manage users using Azure AD with Active Directory DS.
- Implement Windows Hello for Business.
- Join devices to Azure AD.
- Describe methods of enabling access from external networks.

Module 10: Managing Devices and Device Policies

In this module, students will be introduced to managing device security with Intune. Students will discover how Intune can use device profiles to manage configuration of devices to protect data on a device. Students will learn how to create and deploy compliance policies and use compliance policies for conditional access. The module concludes with monitoring devices enrolled in Intune.

Lessons

- Microsoft Intune Overview
- Managing devices with Intune
- Implement device compliance policies

Lab : Practice Lab - Managing devices

- Configuring Microsoft Intune for device management
- Configuring compliance policies and device profiles
- Enrolling Windows 10 devices and managing compliance

After completing this module, students will be able to:

- Describe mobile device management with Intune.
- Create and assign device profiles to protect data on devices.
- Deploy compliance and conditional access policies.
- Use Intune to monitor device compliance.

Module 11: Managing Security

In this module, students will learn about data protection. Topics will include Windows & Azure Information Protection, and various encryption technologies supported in Windows 10. This module also covers key capabilities of Windows Defender Advanced Threat Protection and how to implement these capabilities on devices in your organization. The module concludes using Windows Defender and using functionalities such as antivirus, firewall and Credential Guard.

Lessons

- Implement device data protection
- Managing Windows Defender ATP
- Managing Windows Defender in Windows 10

Lab : Practice Lab - Managing Security in Windows 10

- Configuring Encrypting File System (EFS)
- Configuring BitLocker
- Configuring a WIP policy in Intune
- Configuring Windows Defender

After completing this module, students will be able to:

- Describe the methods protecting device data.
- Describe the capabilities and benefits of Windows ATP
- Deploy and manage settings for Windows Defender clients.

Module 12 Course Conclusion

Lessons

- Final Exam

Lab : Graded Lab