Microsoft Official Course

20533E

Implementing Microsoft Azure Infrastructure Solutions

Microsoft

Welcome

Thank you for joining us today.

We've worked together with the Microsoft Partner Network and Microsoft IT Academies to bring you a world-class learning experience.

Microsoft Certified Trainers + Instructors. Your instructor is a premier technical and instructional expert who meets ongoing certification requirements.

Customer Satisfaction Guarantee. Our partners offer a satisfaction guarantee and we hold them accountable for it.

At the end of class, please complete an evaluation of today's experience. We value your feedback!

Certification Exam Benefits. After training, consider pursuing a Microsoft Certification to help distinguish your technical expertise and experience. Ask your instructor about available exam promotions and discounts.

We wish you a great learning experience and ongoing career success!

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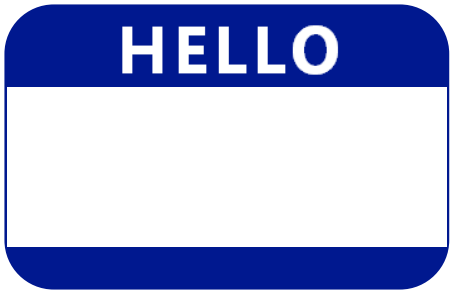
Hello! Instructor introduction

- Instructor: <Name>
- <Title or other credentials, e.g., Microsoft Certified Trainer>
- <Affiliation/Company>
- <A few words about my technical and professional experience>



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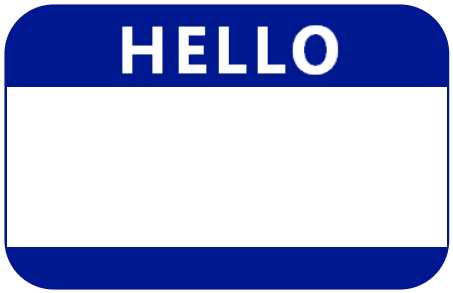
Hello! Student introductions

Let's get acquainted:

- Your name
- Company affiliation
- Title/function
- Microsoft Azure experience
- Your expectations for the course



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Facilities

- Class hours
- Building hours
- Parking
- Restrooms
- Meals
- Phones
- Messages
- Smoking
- Internet access
- Recycling
- Emergency procedures

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About this course: Audience

This course teaches information technology (IT) professionals how to provision and manage services in Microsoft Azure. Students will learn how to implement infrastructure components such as virtual networks, virtual machines (VMs), Azure App Service, and storage and disaster recovery in Azure. Students also will learn how to plan for and manage Azure Active Directory (Azure AD) and configure Azure AD integration with the on-premises Active Directory domains.

About this course: Prerequisites

Before attending this course, students must have:

- Completed the Microsoft Certified Systems Administrator (MCSA) certification in Windows Server 2012 or Windows Server 2016
- Understanding of on-premises virtualization technologies, including: VMs, virtual networking, and virtual hard disks
- Understanding of network configuration, including: TCP/IP, Domain Name System (DNS), virtual private networks (VPNs), firewalls, and encryption technologies
- Understanding of websites, including: how to create, configure, monitor, and deploy a website on Internet Information Services (IIS)
- Understanding of Active Directory concepts, including: domains, forests, domain controllers, replication, Kerberos protocol, and Lightweight Directory Access Protocol (LDAP)
- Understanding of resilience and disaster recovery, including backup and restore operations

About this course: Objectives

After completing this course, students will be able to:

- Describe Azure architecture components, including infrastructure, tools, and portals
- Implement and manage virtual networking within Azure and configure cross-premises connectivity
- Plan and create Azure VMs and virtual machine scale sets
- Configure, manage, and monitor Azure VMs to optimize availability and reliability
- Implement Azure App Service
- Plan and implement Azure storage
- Implement container-based workloads in Azure
- Plan and implement Azure Backup and disaster recovery
- Implement Azure AD
- Manage an Active Directory infrastructure in a hybrid or cloud only environment
- Manage, monitor and automate operations in Azure

Your course materials *(OPTIONAL)*

Designed to optimize your classroom learning experience and support you back on the job

Microsoft Official Course handbook

- Organized by modules
- Includes Labs and Lab Answer Keys
- Module Reviews and Takeaways make great on-the-job references

Digital Companion Content

- Supplemental content and helpful links
- Download at: https://aka.ms/Companion-MOC

Your course materials *(OPTIONAL)*

Microsoft Official Course Handbook (Digital)

- Access online using the Skillpipe reader by Arvato, at https://skillpipe.courseware-marketplace.com/en-GB/Account/Login
- Register/sign in and redeem your digital courseware
- Easily add notes and comments, and highlight content
- Organized by module
- Includes Labs and Lab Answer Keys
- Module Reviews and Takeaways make great on-the-job references

Digital Companion Content

- Supplemental content and helpful links
- Download at: https://aka.ms/Companion-MOC

Course outline

Module 1
Introduction to Microsoft Azure

Module 2
Implementing and managing Azure networking

Module 3
Implementing Microsoft Azure Virtual Machines and virtual machine scale sets

Module 4
Managing Azure VMs

Module 5
Implementing Azure App Service

Module 6
Planning and implementing Azure storage

Course outline, continued

Module 7
Implementing containers in Azure

Module 8
Planning and implementing backup and disaster recovery

Module 9
Implementing Azure Active Directory

Module 10
Managing Active Directory infrastructure in hybrid and cloud only scenarios

Module 11
Using Azure-based management, monitoring, and automation

Microsoft Certification Program

Get trained. Get certified.
Get ahead.

Microsoft Certifications demonstrate that you have the skills to design, deploy, and optimize the latest technology solutions.

Ask your Microsoft Learning Partner how you can prepare for certification.

For more information about Microsoft Certifications, go to: http://www.microsoft.com/learning/certification

Microsoft Certified Solutions Expert (MCSE)

Microsoft Certified Solutions Associate (MCSA)

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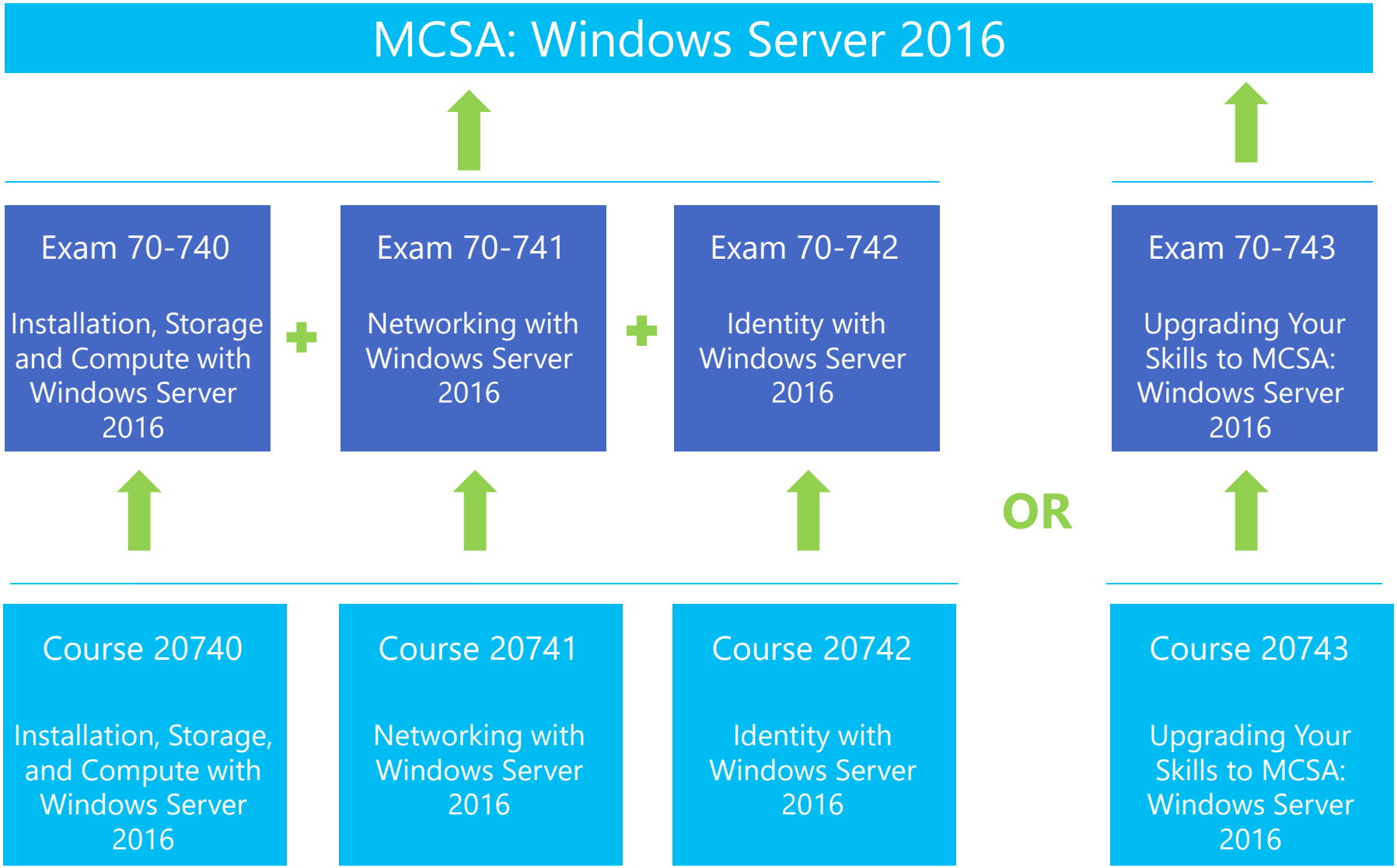
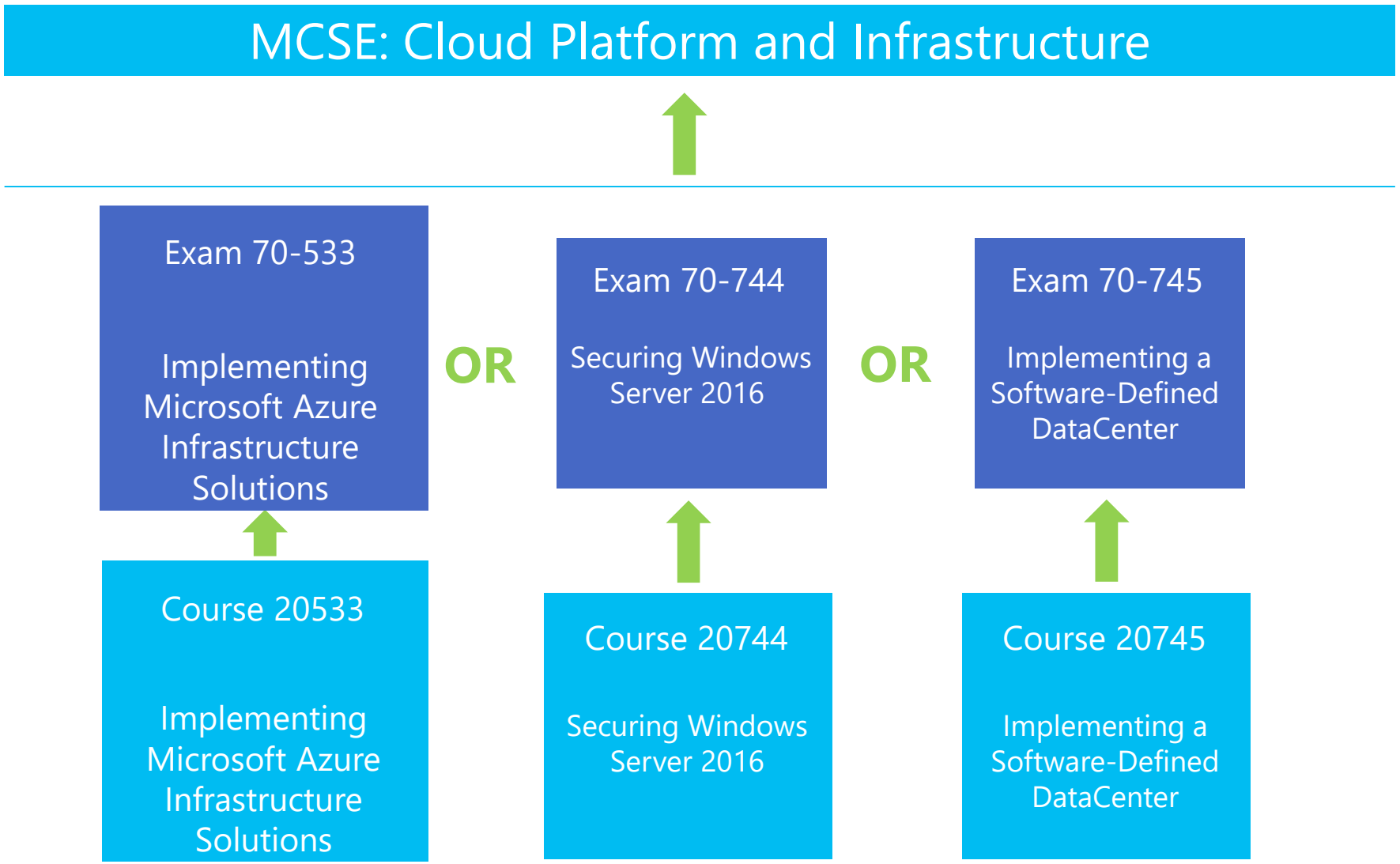
Windows Server 2016 certification path



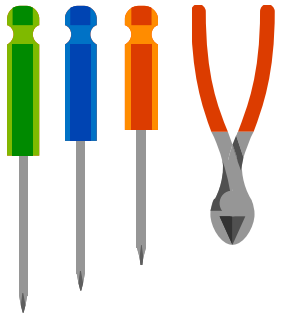
Windows Server 2016 certification path *(continued)*



For other options see: https://www.microsoft.com/en-us/learning/mcse-cloud-platform-infrastructure.aspx

Preparing for the Labs

Your lab activities will be centered around a fictitious company that we will call A. Datum Corporation, through which you will learn how to:

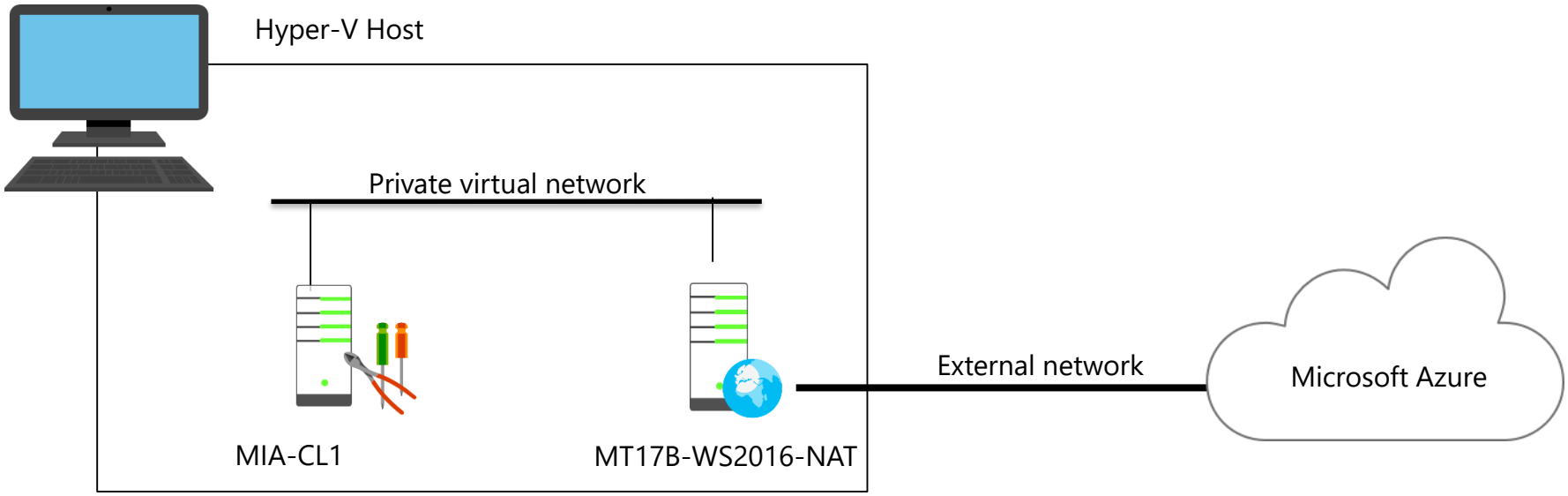


- Implement and manage virtual networking within Azure and configure cross-premises connectivity
- Create Azure VMs and virtual machine scale sets
- Configure, manage, and monitor Azure VMs to optimize availability and reliability
- Implement Azure App Service
- Implement Azure storage
- Implement container-based workloads in Azure
- Implement Azure Backup and site recovery
- Implement Azure Active Directory (Azure AD)
- Manage an Active Directory infrastructure in a hybrid or cloud only environment
- Manage, monitor and automate operations in Azure

You will work in a VM environment connected to Microsoft Azure to complete the labs

VM environment

VM name	Use as
20533E-MIA-CL1	Windows 10 standalone client with the Microsoft Azure management tools installed
MT17B-WS2016-NAT	Internet gateway



Microsoft Learning Azure Pass

- You will use the Microsoft Learning Azure Pass to provide access to Microsoft Azure for demonstrations and labs
- Microsoft Learning Azure Pass access and configuration
- Best Practices for Microsoft Learning Azure Pass Usage:
  - Check the dollar balance of you Azure Pass within Microsoft Azure once you have set up your subscription, and be aware of how much you are consuming as you proceed through the labs
  - Do not allow Microsoft Azure components to run overnight or for extended periods unless you need to do so
  - Remove any Microsoft Azure–created components or services such as storage, virtual machines, or cloud services, after you finish your lab to help minimize cost usage and extend the life of your Microsoft Learning Azure Pass

WARNING – You May Experience UI Discrepancies (OPTIONAL)

Given the dynamic nature of Microsoft cloud tools, you may experience Azure user interface (UI) changes that were made following courseware development and that do not match up with lab instructions.

The Microsoft Learning team will document these changes for instructors as they are brought to our attention. However, given the dynamic nature of cloud updates, you may run into changes before we become aware of them.

If this occurs, you will have to adapt to the changes and work through them in the labs as necessary.

Demonstration: Using third-party hosted labs for Microsoft Courseware

In this demonstration, you will learn how to:

- Access the third-party lab environment
- Switch between VMs

Read the online Lab Notes carefully, because some procedures related to on-premises lab versus online labs may have slightly different steps. Any differences will be called out in the Lab Notes.

Demonstration: Using Hyper-V Manager *(OPTIONAL)*

In this demonstration, you will learn how to:

- Open Hyper-V Manager
- Navigate the various sections/panes within Hyper-V Manager:
  - VMs, snapshots, and actions (server-specific and VM-specific)
- Identify the VMs you will use in the labs for this course
- Take a snapshot and apply a snapshot
- Connect to a VM
- Start and sign in to a VM
- Switch between full screen and window modes
- Revert to the previous snapshot
- Shut down a VM:
  - Know when to shut down versus turn off a VM
- Close Hyper-V Manager