MS-AZ900T00: MICROSOFT AZURE FUNDAMENTALS

DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
1 Day	Beginner	Azure	Instructor-led	NA

INTRODUCTION

This course will provide foundational level knowledge on cloud concepts; core Azure services; and Azure management and governance features and tools.

AUDIENCE PROFILE

This course is suitable for IT personnel who are just beginning to work with Azure. This audience wants to learn about our offerings and get hands-on experience with the product. This course primarily uses the Azure portal and command line interface to create resources and does not require scripting skills. Students in this course will gain confidence to take other role-based courses and certifications, such as Azure Administrator. This course combines lectures, demonstrations, and hands-on labs. This course will also help prepare someone for the AZ-900 exam.

PREREQUISITES

There are no prerequisites for taking this course. Familiarity with cloud computing is helpful but isn't necessary.

COURSE OBJECTIVES

After completing this course, students will be able to:

– Understand general cloud computing concepts
– Understand core services available with Microsoft Azure
– Understand security, privacy, compliance and trust with Microsoft Azure
– Understand pricing and support models available with Microsoft

COURSE CONTENT

Module 1: Describe cloud computing
This module introduces you to cloud computing. It covers things such as cloud concepts, deployment models, and understanding shared responsibility in the cloud.
Lessons

– Introduction.
– Introduction to Microsoft Azure Fundamentals.
– Introduction to cloud computing.
– What is cloud computing.
– Describe the shared responsibility model.
– Define cloud models.
– Describe the consumption-based model.
– Knowledge check.
– Summary.
After completing this module, students will be able to:

– Define cloud computing.

– Describe the shared responsibility model.
– Define cloud models, including public, private, and hybrid.
– Identify appropriate use cases for each cloud model.
– Describe the consumption-based model.
– Compare cloud pricing models.

Module 2: Describe the benefits of using cloud services
This module introduces you to the benefits cloud computing can offer you or your organization.
Lessons

– Introduction.
– Describe the benefits of high availability and scalability in the cloud.
– Describe the benefits of reliability and predictability in the cloud.
– Describe the benefits of security and governance in the cloud.

– Describe the benefits of manageability in the cloud.
– Knowledge check.
– Summary.
After completing this module, students will be able to:

– Describe the benefits of high availability and scalability in the cloud.
– Describe the benefits of reliability and predictability in the cloud.
– Describe the benefits of security and governance in the cloud.
– Describe the benefits of manageability in the cloud.

Module 3: Describe cloud service types
This module covers the different cloud service types and shares some of the use cases and benefits aligned with each service type.
Lessons

– Introduction.

- Describe Infrastructure as a Service.
- Describe Platform as a Service.
- Describe Software as a Service.
- Knowledge check.
- Summary.

After completing this module, students will be able to:

- Describe Infrastructure as a Service (IaaS).
- Describe Platform as a Service (PaaS).
- Describe Software as a Service (SaaS).
- Identify appropriate use cases for each cloud service (IaaS, PaaS, SaaS).

Module 4: Describe the core architectural components of Azure

This module explains the basic infrastructure components of Microsoft Azure. You'll learn about the physical infrastructure, how resources are managed, and have a chance to create an Azure resource.

Lessons

- Introduction.
- What is Microsoft Azure.
- Get started with Azure accounts.
- Exercise - Explore the Learn sandbox.
- Describe Azure physical infrastructure.
- Describe Azure management infrastructure.
- Exercise - Create an Azure resource.
- Knowledge check.
- Summary.

After completing this module, students will be able to:

- Describe Azure regions, region pairs, and sovereign regions
- Describe Availability Zones
- Describe Azure datacenters
- Describe Azure resources and Resource Groups
- Describe subscriptions
- Describe management groups
- Describe the hierarchy of resource groups, subscriptions, and management groups

Module 5: Describe Azure compute and networking services

This module focuses on some of the computer services and networking services available within Azure.

Lessons

- Introduction.
- Describe Azure virtual machines.

- Exercise - Create an Azure virtual machine.
- Describe Azure virtual desktop.
- Describe Azure containers.
- Describe Azure functions.
- Describe application hosting options.
- Describe Azure virtual networking.
- Exercise - Configure network access.
- Describe Azure virtual private networks.
- Describe Azure ExpressRoute.
- Describe Azure DNS.
- Knowledge check.
- Summary.

After completing this module, students will be able to:

- Compare compute types, including container instances, virtual machines, and functions.
- Describe virtual machine (VM) options, including VMs, Virtual Machine Scale Sets, availability sets, Azure Virtual Desktop.
- Describe resources required for virtual machines.
- Describe application hosting options, including Azure Web Apps, containers, and virtual machines.
- Describe virtual networking, including the purpose of Azure Virtual Networks, Azure virtual subnets, peering, Azure DNS, VPN Gateway, and ExpressRoute.
- Define public and private endpoints.

Module 6: Describe Azure storage services

This module introduces you to storage in Azure, including things such as different types of storage and how a distributed infrastructure can make your data more resilient.

Lessons

- Introduction.
- Describe Azure storage accounts.
- Describe Azure storage redundancy.
- Describe Azure storage services.
- Exercise - Create a storage blob.
- Identify Azure data migration options.
- Identify Azure file movement options.
- Knowledge check.
- Summary.

After completing this module, students will be able to:

- Compare Azure storage services.

- Describe storage tiers.
- Describe redundancy options.
- Describe storage account options and storage types.
- Identify options for moving files, including AzCopy, Azure Storage Explorer, and Azure File Sync.
- Describe migration options, including Azure Migrate and Azure Data Box.

Module 7: Describe Azure identity, access, and security

This module covers some of the authorization and authentication methods available with Azure.

Lessons

- Introduction.
- Describe Azure directory services.
- Describe Azure authentication methods.
- Describe Azure external identities.
- Describe Azure conditional access.
- Describe Azure role-based access control.
- Describe zero trust model.
- Describe defense-in-depth.
- Describe Microsoft Defender for Cloud.
- Knowledge check.
- Summary.

After completing this module, students will be able to:

- Describe directory services in Azure, including Microsoft Entra ID and Microsoft Entra Domain Services.
- Describe authentication methods in Azure, including single sign-on (SSO), multifactor authentication (MFA), and passwordless.
- Describe external identities and guest access in Azure.
- Describe Microsoft Entra Conditional Access.
- Describe Azure Role Based Access Control (RBAC).
- Describe the concept of Zero Trust.
- Describe the purpose of the defense in depth model.
- Describe the purpose of Microsoft Defender for Cloud.

Module 8: Describe cost management in Azure

This module explores methods to estimate, track, and manage costs in Azure.

Lessons

- Introduction.
- Describe factors that can affect costs in Azure.
- Compare the Pricing and Total Cost of Ownership calculators.

- Exercise - Estimate workload costs by using the Pricing calculator.
- Exercise - Compare workload costs using the TCO calculator.
- Describe the Microsoft Cost Management tool.
- Describe the purpose of tags.
- Knowledge check.
- Summary.

After completing this module, students will be able to:

- Describe factors that can affect costs in Azure.
- Compare the Pricing calculator and Total Cost of Ownership (TCO) calculator.
- Describe the Microsoft Cost Management tool.
- Describe the purpose of tags.

Module 9: Describe features and tools in Azure for governance and compliance
This module introduces you to tools that can help with governance and compliance within Azure.
Lessons

- Introduction.
- Describe the purpose of Microsoft Purview.
- Describe the purpose of Azure Policy.
- Describe the purpose of resource locks.

- Exercise - Configure a resource lock.
- Describe the purpose of the Service Trust portal.
- Knowledge check.
- Summary.

After completing this module, students will be able to:

- Describe the purpose of Microsoft Purview.
- Describe the purpose of Azure Policy.
- Describe the purpose of resource locks.
- Describe the purpose of the Service Trust portal.

Module 10: Describe features and tools for managing and deploying Azure resources
This module covers tools that help you manage your Azure and on-premises resources.
Lessons

- Introduction.
- Describe tools for interacting with Azure.
- Describe the purpose of Azure Arc.
- Describe Azure Resource Manager and Azure ARM templates.
- Knowledge check.
- Summary.

After completing this module, students will be able to:

- Describe Azure portal.
- Describe Azure Cloud Shell, including Azure CLI and Azure PowerShell.
- Describe the purpose of Azure Arc.
- Describe Azure Resource Manager (ARM) and Azure ARM templates.

Module 11: Describe monitoring tools in Azure
This module covers tools that you can use to monitor your Azure environment.
Lessons

- Introduction.
- Describe the purpose of Azure Advisor
- Describe Azure Service Health
- Describe Azure Monitor, including Azure Log Analytics, Azure Monitor Alerts, and Application.
- Knowledge check.
- Summary.

After completing this module, students will be able to:

- Describe the purpose of Azure Advisor.
- Describe Azure Service Health.
- Describe Azure Monitor, including Azure Log Analytics, Azure Monitor Alerts, and Application Insights.

ASSOCIATED CERTIFICATIONS & EXAM

This course will prepare delegates to write the Microsoft AZ-900: Microsoft Azure Fundamentals exam.