

# MICROSOFT AZURE FUNDAMENTALS Course (AZ-900)

The Microsoft Azure Fundamentals (AZ–900) course is an entry–level program covering fundamental concepts of Microsoft Azure cloud services. In this course, participants gain insights into core cloud concepts, key Azure services, pricing and support, and governance and compliance in Azure. It is designed for individuals who are new to Azure or want to establish a foundational understanding of cloud principles.

## مروری بر دوره

Azure Fundamentals covers all the foundational knowledge of cloud services. This certification covers all the basics of cloud services like networking, storage, computing, security, etc. It proves your knowledge of cloud concepts, services, security, workloads, and pricing in Azure. This certification is the first step towards Azure, and it is beneficial for everyone from technical and non–technical backgrounds. If you are looking for a Microsoft azure certification roadmap but don't know much about cloud concepts, this certification is surely for you.

# آنچه خواهید آموخت

- توضیح مفاهیم محاسبات ابری
- توضیح مزایای استفاده از خدمات ابری
- توضیح انواع خدمات ابری
- Azure توضیح مؤلفههای معماری اصلی •
- Azure توضیح خدمات محاسباتی و شبکه •
- توضیح خدمات ذخیرهسازیAzure
- Azure توضیح هویت، دسترسی و امنیت •
- Azure توضیح مدیریت هزینه در •
- برای حاکمیت و انطباق Azure توضیح ویژگیها و ابزارهای موجود در
- Azure توضیح ویژگیها و ابزارها برای مدیریت و پیادهسازی منابع •
- Azure توضیح ابزارهای نظارت در

# سرفصل ها

- info@gandotech.com
- Lisbon, Sintra, Mirante St, No3, 2/C
- **+**351 911970800
- P.Code: 27 45-039



- 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

- 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

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

## Module 4: Describe the core architectural components of Azure

- 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

- 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
- $\bullet \quad \mathsf{Describe}\,\mathsf{application}\,\mathsf{hosting}\,\mathsf{options}, \mathsf{including}\,\mathsf{Azure}\,\mathsf{Web}\,\mathsf{Apps}, \mathsf{containers}, \mathsf{and}\,\mathsf{virtual}\,\mathsf{machines}$
- Describe virtual networking, including the purpose of Azure Virtual Networks, Azure virtual subnets, peering, Azure DNS, VPN Gateway, and ExpressRoute
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• Define public and private endpoints

#### Module 6: Describe Azure storage services

- 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

- Describe directory services in Azure, including Azure Active Directory (AD) and Azure AD DS
- Describe authentication methods in Azure, including single sign—on (SSO), multifactor authentication (MFA), and passwordless
- Describe external identities and guest access in Azure
- Describe Azure AD 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

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

#### Module 9: Describe features and tools in Azure for governance and compliance

- Describe the purpose of Azure Blueprints
- 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

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- 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

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

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