# Introduction to Cloud Infrastructure (AZ-900) Training

Duration: **1 Day**

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## Overview

This course provides a foundation in **cloud computing and Microsoft Azure**. It introduces essential cloud concepts before progressing to the core Azure services, architectural components, security capabilities, and the tools used to manage and govern Azure environments.

Participants explore public, private, and hybrid cloud models, the shared responsibility approach, and the key benefits associated with cloud services. After examining the differences between IaaS, PaaS, and SaaS, the course introduces the fundamental compute, networking, and storage services available in Microsoft Azure.

The programme then explores identity and access management, security, cost management, governance, compliance, resource deployment, and monitoring. Together, these topics provide learners with a broad understanding of how Azure environments are structured, secured, managed, and monitored.

Delivered through a combination of presentations, instructor demonstrations, and practical activities, the course provides a starting point for further role-based Azure training while also supporting preparation for the **AZ-900 Microsoft Azure Fundamentals** exam.

## Prerequisites

There are no formal prerequisites for attending this course.

Previous familiarity with cloud computing may be useful but is not required.

## Who Should Attend

This course is particularly suitable for:

- IT professionals who are beginning to work with Microsoft Azure,
- Individuals seeking foundational knowledge of cloud computing and Azure services,
- Learners preparing to progress to role-based training such as Azure Administrator,
- Participants who want introductory experience using the Azure Portal and Command Line Interface,
- Professionals preparing for the AZ-900 exam.

Scripting experience is not required.

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## What You Will Learn

By the end of this course, participants will be able to:

- Describe cloud computing concepts and common deployment models,
- Explain the main benefits cloud services provide to individuals and organisations,
- Distinguish between IaaS, PaaS, and SaaS service models,
- Describe the physical and management infrastructure that forms the core architecture of Microsoft Azure,
- Explain Azure Compute, Networking, and Storage services and their common use cases,
- Describe fundamental Azure Identity, Access, and Security capabilities,
- Identify factors affecting Azure costs and describe Cost Management options,
- Recognise the principal tools used for Governance and Compliance,
- Describe tools for deploying and managing Azure resources,
- Identify services used to monitor Azure environments.

## Outline

### Module 1 – Describe Cloud Computing

This module introduces the principles of cloud computing and explains how responsibilities are divided between customers and cloud service providers.

- Introduction to Microsoft Azure Fundamentals
- Introduction to Cloud Computing
- What is Cloud Computing?
- The Shared Responsibility Model
- Cloud Deployment Models
- Public, Private, and Hybrid Cloud
- The Consumption-Based Model
- Module assessment
- Summary and review

### Module 2 – Describe the Benefits of Using Cloud Services

This module examines the operational and business benefits that cloud computing can provide.

- High Availability and Scalability
- Reliability and Predictability
- Security and Governance benefits
- Cloud Manageability
- Sustainability considerations
- Module assessment
- Summary and review

### Module 3 – Describe Cloud Service Types

Participants explore the three main cloud service models and understand where each can be applied.

- Infrastructure as a Service (IaaS)

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- Platform as a Service (PaaS)
- Software as a Service (SaaS)
- Typical use cases for each service model
- Module assessment
- Summary and review

### Module 4 – Describe the Core Architectural Components of Azure

This module introduces the structure of Microsoft Azure and explains how Azure resources are organised and managed.

- What is Microsoft Azure?
- Getting started with Azure Accounts
- Azure Physical Infrastructure
- Azure Management Infrastructure
- Azure resource organisation
- Module assessment
- Summary and review

### Module 5 – Describe Azure Compute Services

Participants explore the principal Azure services used to run applications and workloads.

- Azure Virtual Machines
- Azure Virtual Desktop
- Azure Containers
- Azure Functions
- Overview of AI and Machine Learning services in Azure
- IoT and Edge Services
- Application Hosting options
- Common Compute use cases
- Module assessment
- Summary and review

### Module 6 – Describe Azure Networking Services

This module introduces services that enable secure communication between Azure resources, on-premises environments, and internet-connected clients.

- Azure Virtual Networking
- Azure Virtual Private Networks
- Azure ExpressRoute
- Azure DNS
- Cloud and on-premises connectivity options
- Module assessment
- Summary and review

### Module 7 – Describe Azure Storage Services

Participants explore Azure storage options, data resiliency, and methods for moving information into and within Azure.

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- Azure Storage Accounts
- Azure Storage Redundancy
- Azure Storage Services
- Data resiliency concepts
- Azure Data Migration options
- Azure File Movement options
- Module assessment
- Summary and review

### Module 8 – Describe Azure Identity, Access, and Security

This module introduces identity, authentication, authorisation, and security approaches used to protect Azure environments.

- Azure Directory Services
- Azure Authentication Methods
- Azure External Identities
- Azure Conditional Access
- Azure Role-Based Access Control (RBAC)
- The Zero Trust Model
- Defense-in-Depth
- Encryption in Azure
- Key Management
- Microsoft Defender for Cloud
- Module assessment
- Summary and review

### Module 9 – Describe Cost Management in Azure

Participants explore how Azure costs can be estimated, monitored, managed, and optimised.

- Factors that influence Azure costs
- Azure Pricing Calculator
- Microsoft Cost Management
- The purpose of Tags
- Azure Cost Optimization options
- Module assessment
- Summary and review

### Module 10 – Describe Azure Governance and Compliance

This module introduces tools that help organisations apply standards, control resources, and support compliance requirements.

- Microsoft Purview
- Azure Policy
- Resource Locks
- Service Trust Portal
- Governance approaches
- Compliance fundamentals
- Module assessment
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### Module 11 – Describe Tools for Managing and Deploying Azure Resources

Participants explore the principal tools and technologies used to manage Azure and on-premises resources.

- Tools for interacting with Azure
- Azure Portal and Command Line tools
- Azure Arc
- Azure Resource Manager (ARM)
- Azure ARM Templates
- Resource Deployment concepts
- Module assessment
- Summary and review

### Module 12 – Describe Monitoring Tools in Azure

The final module introduces the services used to monitor Azure environments, service health, and resource performance.

- Azure Advisor
- Azure Service Health
- Azure Monitor
- Monitoring Azure environments
- Reviewing service health and recommendations
- Module assessment
- Summary and review

## Exams and Assessments

This course supports preparation for the **AZ-900 Microsoft Azure Fundamentals** exam by developing knowledge across the principal areas covered by the certification.

Module assessments help participants reinforce their understanding and identify areas that may require further study.

**The AZ-900 certification exam is available separately and is not included with the course.**

## Hands-On Learning

The course combines theoretical instruction with practical learning through:

- Instructor presentations,
- Live demonstrations,
- Hands-on lab activities.

Participants gain introductory practical experience working with Azure, including using the **Azure Portal and Command Line Interface** to create and manage basic Azure resources.

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