

## Azure fundamentals AZ-900

Interested in the cloud, but aren't quite sure what it can do for you? This path is the place to start.

In this learning path, you will:

- Learn cloud concepts such as High Availability, Scalability, Elasticity, Agility, Fault Tolerance, and Disaster Recovery
- Understand the benefits of cloud computing in Azure and how it can save you time and money
- Compare and contrast basic strategies for transitioning to the Azure cloud
- Explore the breadth of services available in Azure including compute, network, storage, and security

### Prerequisites

None

### Cloud Concepts - Principles of cloud computing

Explore the core concepts of cloud computing and how it can help your business.

Introduction

What is cloud computing?

Benefits of cloud computing

Compliance terms and requirements

Economies of scale

Capital expenditure (CapEx) versus operational expenditure (OpEx)

Cloud deployment models

Types of cloud services

## Create an Azure account

The first step to using Azure is to sign up. You may sign up directly through Azure.com, with the help of a Microsoft representative, or through a partner. If you're new to Azure, you may sign up for an Azure free account to start exploring with \$200 USD free credit and free services.

Introduction

Create an Azure account

Exercise - Create an Azure account

Understand Azure billing

Azure support options

## Core Cloud Services - Introduction to Azure

Get started with Azure by creating and configuring your first website in the cloud.

What is Azure?

Tour of Azure services

Exercise - Create a website hosted in Azure

Exercise - Configure an App Service

Exercise - Access an App Service using Azure Cloud Shell

## Core Cloud Services - Azure architecture and service guarantees

Azure provides a global network of secure datacenters you can deploy your services into. Learn about the physical architecture of Azure, how redundancy is provided, and what service guarantees Microsoft provides.

Introduction

Understand Datacenters and Regions in Azure

- Understand Geographies in Azure
- Understand Availability Zones in Azure
- Understand Region Pairs in Azure
- Understand Service-Level Agreements for Azure
- Compose SLAs across services
- Improve your app reliability in Azure

## Core Cloud Services - Manage services with the Azure portal

Tour the Azure portal features and services, and customize your portal.

- Introduction
- Azure management options
- Navigate the portal
- Exercise - Work with panes
- Exercise - Use the Azure portal
- Azure Portal dashboards
- Exercise - Customize the dashboard
- Access public and private preview features

## Core Cloud Services - Azure compute options

Review the Azure compute services and explore how they can solve common business needs.

- Introduction
- Essential Azure compute concepts

Explore Azure Virtual Machines

Explore Containers in Azure

Explore Azure App Service

Explore Serverless computing in Azure

## Core Cloud Services - Azure data storage options

In this module, we'll explore the benefits of Azure data storage versus on-premises storage.

Introduction

Benefits of using Azure to store data

How Azure data storage can meet your business storage needs

Comparison between Azure data storage and on-premises storage

Knowledge check

## Core Cloud Services - Azure networking options

Running your app or service in the cloud requires a fast and secure network. Learn some of the Azure networking basics and how Azure networking helps improve resiliency and reduce latency.

Introduction

Deploy your site to Azure

Scale with Azure Load Balancer

Reduce latency with Azure Traffic Manager

## Security, responsibility, and trust in Azure

Discuss the basic concepts for protecting your infrastructure and data when you work in the cloud. Understand what responsibilities are yours and what Azure takes care of for you.

Introduction

Cloud security is a shared responsibility

Get tips from Azure Security Center

Identity and access

Encryption

Overview of Azure certificates

Protect your network

Protect your shared documents

Azure Advanced Threat Protection

Understand Security Considerations for Application Lifecycle Management Solutions

## Apply and monitor infrastructure standards with Azure Policy

Learn about governance and management in Azure services.

Introduction

Define IT compliance with Azure Policy

Organize policy with initiatives

Enterprise governance management

Define standard resources with Azure Blueprints

Explore your service compliance with Compliance Manager

Monitor your service health

## Control and organize Azure resources with Azure Resource Manager

Use Azure Resource Manager to organize resources, enforce standards, and protect critical assets from deletion.

Introduction

Principles of resource groups

Use tagging to organize resources

Use policies to enforce standards

Secure resources with role-based access control

Use resource locks to protect resources

## Predict costs and optimize spending for Azure

Cost is one of the most important aspects of the cloud and can have a massive impact on your business. Azure has several tools available to help you get a better understanding of cloud spend and some best practices that you can leverage to help you save money.

Introduction

Purchase Azure products and services

Factors affecting costs

Exercise - Estimate costs with the Azure pricing calculator

Exercise - Predict and optimize with Cost Management and Azure Advisor

Exercise - Estimate the Total Cost of Ownership with the Azure TCO calculator

Save on infrastructure costs

Save on licensing costs