

# AZ-300.x: OD—Content Mapping

Six Courses:

- AZ-300.1: Deploying and Configuring Infrastructure
- AZ-300.2: Implementing Workloads and Security
- AZ-300.3: Understanding Cloud Architect Technology Solutions
- AZ-300.4: Creating and Deploying Apps
- AZ-300.5: Implementing Authentication and Secure Data
- AZ-300.6: Developing for the Cloud

## AZ-300.1: Deploying and Configuring Infrastructure

Testing May Include	Course Content
<b>Configure diagnostic settings on resources</b>	Module 1 - Managing Azure Subscriptions and Resources
<b>Create baseline for resources</b>	Module 1 - Managing Azure Subscriptions and Resources
<b>Create and Test alerts</b>	Module 1 - Managing Azure Subscriptions and Resources
<b>Analyze alerts across subscription</b>	Module 1 - Managing Azure Subscriptions and Resources
<b>Analyze metrics across subscription</b>	Module 1 - Managing Azure Subscriptions and Resources
<b>Create action groups</b>	Module 1 - Managing Azure Subscriptions and Resources
<b>Monitor for unused resources</b>	Module 1 - Managing Azure Subscriptions and Resources
<b>Monitor spend</b>	Module 1 - Managing Azure Subscriptions and Resources
<b>Report on spend</b>	Module 1 - Managing Azure Subscriptions and Resources
<b>Utilize Log Search query functions</b>	Module 1 - Managing Azure Subscriptions and Resources
<b>View Alerts in Log Analytics</b>	Module 1 - Managing Azure Subscriptions and Resources

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Post Box - 500397

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Testing May Include	Course Content
<b>Configure network access to the storage account</b>	Module 2 - Implementing and Managing Storage
<b>Create and configure storage account</b>	Module 2 - Implementing and Managing Storage
<b>Generate Shared access signature</b>	Module 2 - Implementing and Managing Storage
<b>Install and use Azure Storage Explorer</b>	Module 2 - Implementing and Managing Storage
<b>Manage access keys</b>	Module 2 - Implementing and Managing Storage
<b>Monitor Activity log by using Log Analytics</b>	Module 2 - Implementing and Managing Storage
<b>Implement Azure storage replication</b>	Module 2 - Implementing and Managing Storage

Testing May Include	Course Content
<b>Configure High Availability</b>	Module 3 - Deploying and Managing Virtual Machines (VMs)
<b>Configure Monitoring</b>	Module 3 - Deploying and Managing Virtual Machines (VMs)
<b>Configure Networking</b>	Module 3 - Deploying and Managing Virtual Machines (VMs)
<b>Configure Storage</b>	Module 3 - Deploying and Managing Virtual Machines (VMs)
<b>Configure Virtual Machine Size</b>	Module 3 - Deploying and Managing Virtual Machines (VMs)
<b>Deploy and configure scale sets</b>	Module 3 - Deploying and Managing Virtual Machines (VMs)
<b>Modify ARM template</b>	Module 3 - Deploying and Managing Virtual Machines (VMs)
<b>Configure Location of new VMs</b>	Module 3 - Deploying and Managing Virtual Machines (VMs)
<b>Configure VHD template</b>	Module 3 - Deploying and Managing Virtual Machines (VMs)
<b>Deploy from template</b>	Module 3 - Deploying and Managing Virtual Machines (VMs)
<b>Save a deployment as an ARM template</b>	Module 3 - Deploying and Managing Virtual Machines (VMs)
<b>Deploy Windows and Linux VMs</b>	Module 3 - Deploying and Managing Virtual Machines (VMs)

Testing May Include	Course Content
<b>Create and configure VNET peering</b>	Module 4 - Configuring and Managing Virtual Networks
<b>Create and configure VNET to VNET</b>	Module 4 - Configuring and Managing Virtual Networks

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<b>Verify virtual network connectivity</b>	Module 4 - Configuring and Managing Virtual Networks
<b>Create virtual network gateway</b>	Module 4 - Configuring and Managing Virtual Networks
<b>Configure private IP addressing</b>	Module 4 - Configuring and Managing Virtual Networks
<b>Configure public IP addresses</b>	Module 4 - Configuring and Managing Virtual Networks
<b>Create and configure network routes</b>	Module 4 - Configuring and Managing Virtual Networks
<b>Create and configure network interface</b>	Module 4 - Configuring and Managing Virtual Networks
<b>Create and configure subnets</b>	Module 4 - Configuring and Managing Virtual Networks
<b>Create and configure virtual network</b>	Module 4 - Configuring and Managing Virtual Networks

Testing May Include	Course Content
<b>Add custom domains</b>	Module 5 - Managing Identities
<b>Configure Azure AD Identity Protection</b>	Module 5 - Managing Identities
<b>Configure Azure AD Join</b>	Module 5 - Managing Identities
<b>Configure Enterprise State Roaming</b>	Module 5 - Managing Identities
<b>Configure self-service password reset</b>	Module 5 - Managing Identities
<b>Implement conditional access policies</b>	Module 5 - Managing Identities
<b>Manage multiple directories</b>	Module 5 - Managing Identities
<b>Perform an access review</b>	Module 5 - Managing Identities
<b>Install and configure Azure AD Connect</b>	Module 5 - Managing Identities
<b>Configure federation</b>	Module 5 - Managing Identities
<b>Configure single sign-on</b>	Module 5 - Managing Identities
<b>Manage and troubleshoot Azure AD Connect</b>	Module 5 - Managing Identities
<b>Troubleshoot password sync and writeback</b>	Module 5 - Managing Identities

## AZ-300.2: Implementing Workloads and Security

Testing May Include	Course Content
<b>Migrate by using Azure Site Recovery (ASR)</b>	Module 1 - Evaluating and Performing Server Migration to Azure
<b>Migrate using P2V</b>	Module 1 - Evaluating and Performing Server Migration to Azure
<b>Configure Storage</b>	Module 1 - Evaluating and Performing Server Migration to Azure
<b>Create a backup vault</b>	Module 1 - Evaluating and Performing Server Migration to Azure

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<b>Prepare source (i.e. AWS, Azure, Hyper-V, VMware) and target environments</b>	Module 1 - Evaluating and Performing Server Migration to Azure
<b>Backup and restore data</b>	Module 1 - Evaluating and Performing Server Migration to Azure
<b>Deploy Azure Site Recovery (ASR) agent</b>	Module 1 - Evaluating and Performing Server Migration to Azure
<b>Prepare virtual network</b>	Module 1 - Evaluating and Performing Server Migration to Azure

Testing May Include	Course Content
<b>Create and manage objects</b>	Module 2 - Implementing and Managing Application Services
<b>Manage an Logic App Resource</b>	Module 2 - Implementing and Managing Application Services
<b>Manage Azure Function app settings</b>	Module 2 - Implementing and Managing Application Services
<b>Manage Event Grid</b>	Module 2 - Implementing and Managing Application Services
<b>Manage Service Bus</b>	Module 2 - Implementing and Managing Application Services

Testing May Include	Course Content
<b>Configure application gateway</b>	Module 3 - Implementing Advanced Virtual Networking
<b>Configure load balancing rules</b>	Module 3 - Implementing Advanced Virtual Networking
<b>Implement front end IP configurations</b>	Module 3 - Implementing Advanced Virtual Networking
<b>Troubleshoot load balancing</b>	Module 3 - Implementing Advanced Virtual Networking
<b>Create and configure Azure VPN Gateway</b>	Module 3 - Implementing Advanced Virtual Networking
<b>Create and configure site to site VPN</b>	Module 3 - Implementing Advanced Virtual Networking
<b>Configure Express Route</b>	Module 3 - Implementing Advanced Virtual Networking
<b>Verify on premises connectivity</b>	Module 3 - Implementing Advanced Virtual Networking
<b>Troubleshoot on premises connectivity with Azure</b>	Module 3 - Implementing Advanced Virtual Networking

## AZ-300.3: Understanding Cloud Architect Technology Solutions

Testing May Include	Course Content
<b>Validate data storage technology capacity limitations</b>	Module 1 - Selecting Compute and Storage Solutions
<b>Address durability of data</b>	Module 1 - Selecting Compute and Storage Solutions
<b>Provide for appropriate throughput of data access</b>	Module 1 - Selecting Compute and Storage Solutions
<b>Evaluate structure of data storage</b>	Module 1 - Selecting Compute and Storage Solutions
<b>Provide for data archiving, retention, and compliance</b>	Module 1 - Selecting Compute and Storage Solutions

Testing May Include	Course Content
<b>Leverage appropriate design patterns</b>	Module 2 - Hybrid Networking
<b>Select appropriate network connectivity options</b>	Module 2 - Hybrid Networking
<b>Design for hybrid topologies</b>	Module 2 - Hybrid Networking
<b>Leverage appropriate design patterns</b>	Module 2 - Hybrid Networking
<b>Select appropriate network connectivity options</b>	Module 2 - Hybrid Networking

## AZ-300.4: Creating and Deploying Apps

Testing May Include	Course Content
<b>Create an Azure app service web app by using Azure CLI, Powershell, and other tools</b>	Module 1 - Creating Web Applications using PaaS
<b>Create documentation for the API by using open source and other tools</b>	Module 1 - Creating Web Applications using PaaS
<b>Create an App Service Web App for Containers</b>	Module 1 - Creating Web Applications using PaaS
<b>Create an App Service background task by using WebJobs</b>	Module 1 - Creating Web Applications using PaaS

Testing May Include	Course Content
<b>Develop a stateful Reliable Service</b>	Module 2 - Creating Apps and Services Running on Service Fabric
<b>Develop an actor-based Reliable Service</b>	Module 2 - Creating Apps and Services Running on Service Fabric
<b>Write code to consume Reliable Collections in your service</b>	Module 2 - Creating Apps and Services Running on Service Fabric

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Testing May Include	Course Content
<b>Configure diagnostic settings on resources</b>	Module 3 - Using Azure Kubernetes Service
<b>Create a container image by using a Dockerfile</b>	Module 3 - Using Azure Kubernetes Service
<b>Create an Azure Container Service (ACS/AKS) cluster by using the Azure CLI</b>	Module 3 - Using Azure Kubernetes Service
<b>Create an Azure Container Service (ACS/AKS) cluster by using the Azure Portal</b>	Module 3 - Using Azure Kubernetes Service
<b>Publish an image to the Azure Container Registry</b>	Module 3 - Using Azure Kubernetes Service
<b>Implement an application that runs on an Azure Container Instance</b>	Module 3 - Using Azure Kubernetes Service
<b>Implement container instances by using Azure Container Service (ACS/AKS), Azure Service Fabric, and other tools</b>	Module 3 - Using Azure Kubernetes Service
<b>Manage container settings by using code</b>	Module 3 - Using Azure Kubernetes Service

## AZ-300.5: Implementing Authentication and Secure Data

Testing May Include	Course Content
<b>Implement authentication by using certificates, forms-based authentication, tokens, Windows-integrated authentication</b>	Module 1 - Implementing Authentication
<b>Implement multi-factor authentication by using Azure AD options</b>	Module 1 - Implementing Authentication

Testing May Include	Course Content
<b>Encrypt and decrypt data at rest</b>	Module 2 - Implementing Secure Data
<b>Encrypt data with Always Encrypted</b>	Module 2 - Implementing Secure Data
<b>Implement Azure Confidential Compute</b>	Module 2 - Implementing Secure Data
<b>Implement SSL/TLS communications</b>	Module 2 - Implementing Secure Data
<b>Manage cryptographic keys in the Azure KeyVault</b>	Module 2 - Implementing Secure Data



## AZ-300.6: Developing for the Cloud

Testing May Include	Course Content
<b>Implement large-scale, parallel, and high-performance apps by using batches</b>	Module 1 - Developing Long-Running Tasks and Distributed Transactions
<b>Implement resilient apps by using queues</b>	Module 1 - Developing Long-Running Tasks and Distributed Transactions
<b>Implement code to address application events by using web hooks</b>	Module 1 - Developing Long-Running Tasks and Distributed Transactions
<b>Address continuous processing tasks by using web jobs</b>	Module 1 - Developing Long-Running Tasks and Distributed Transactions

Testing May Include	Course Content
<b>Configure an app or service to send emails</b>	Module 2 - Configuring a Message-Based Integration Architecture
<b>Configure Event Grid</b>	Module 2 - Configuring a Message-Based Integration Architecture
<b>Configure the Azure Relay Service</b>	Module 2 - Configuring a Message-Based Integration Architecture
<b>Create and configure a Notification Hub</b>	Module 2 - Configuring a Message-Based Integration Architecture
<b>Create and configure an Event Hub</b>	Module 2 - Configuring a Message-Based Integration Architecture
<b>Create and configure a Service Bus</b>	Module 2 - Configuring a Message-Based Integration Architecture
<b>Configure queries across multiple products</b>	Module 2 - Configuring a Message-Based Integration Architecture
<b>Configure an app or service with Microsoft Graph</b>	Module 2 - Configuring a Message-Based Integration Architecture

Testing May Include	Course Content
<b>Implement parallelism, multithreading, processing</b>	Module 3 - Developing for Asynchronous Processing
<b>Implement durable functions, Azure logic apps</b>	Module 3 - Developing for Asynchronous Processing
<b>Implement interfaces with storage</b>	Module 3 - Developing for Asynchronous Processing
<b>Implement interfaces to data access</b>	Module 3 - Developing for Asynchronous Processing
<b>Implement appropriate asynchronous compute models</b>	Module 3 - Developing for Asynchronous Processing

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Testing May Include	Course Content
<b>Implement autoscaling rules and patterns (schedule, operational/system metrics)</b>	Module 4 - Developing for Autoscaling
<b>Implement code that addresses singleton application instances</b>	Module 4 - Developing for Autoscaling
<b>Implement code that addresses transient state</b>	Module 4 - Developing for Autoscaling

Testing May Include	Course Content
<b>Integrate Azure Cognitive Services in an application</b>	Module 5 - Developing Azure Cognitive Services Solutions
<b>Develop solutions by using intelligent algorithms that identify items from images and videos</b>	Module 5 - Developing Azure Cognitive Services Solutions
<b>Develop solutions by using intelligent algorithms related to speech</b>	Module 5 - Developing Azure Cognitive Services Solutions
<b>Develop solutions by using intelligent algorithms related to natural language processing</b>	Module 5 - Developing Azure Cognitive Services Solutions
<b>Develop solutions by using intelligent algorithms related to recommendations and decision making</b>	Module 5 - Developing Azure Cognitive Services Solutions
<b>Develop solutions by using intelligent algorithms related to Bing Search</b>	Module 5 - Developing Azure Cognitive Services Solutions
<b>Create and integrate bots</b>	Module 5 - Developing Azure Cognitive Services Solutions
<b>Integrate machine learning solutions in an app</b>	Module 5 - Developing Azure Cognitive Services Solutions
<b>Create and implement IoT solutions</b>	Module 5 - Developing Azure Cognitive Services Solutions



# AZ-301.x: OD—Content Mapping

Four Courses:

- AZ-301.1: Designing for Identity and Security
- AZ-301.2: Designing a Data Platform Solution
- AZ-301.3: Designing for Deployment, Migration, and Integration
- AZ-301.4: Designing an Infrastructure Strategy

## AZ-301.1: Designing for Identity and Security

Testing May Include	Course Content
Design Identity Management	Module 1 - Managing Security & Identity for Azure Solutions
Design Authentication	Module 1 - Managing Security & Identity for Azure Solutions
Design Authorization	Module 1 - Managing Security & Identity for Azure Solutions
Design for Risk Prevention for Identity	Module 1 - Managing Security & Identity for Azure Solutions

Testing May Include	Course Content
Design Deployments	Module 2 - Integrating SaaS Services Available on the Azure Platform
Design a Networking Strategy	Module 2 - Integrating SaaS Services Available on the Azure Platform
Gather Non-Functional Requirements	Module 2 - Integrating SaaS Services Available on the Azure Platform
Design an API Integration Strategy	Module 2 - Integrating SaaS Services Available on the Azure Platform

## AZ-301.2: Designing a Data Platform Solution

Testing May Include	Course Content
Optimize Consumption Strategy	Module 1 - Backing Azure Solutions with Azure Storage
Design a Storage Strategy	Module 1 - Backing Azure Solutions with Azure Storage

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Design Migrations	Module 1 - Backing Azure Solutions with Azure Storage
Design a Data Archiving Strategy	Module 1 - Backing Azure Solutions with Azure Storage
Design a Site Recovery Strategy	Module 1 - Backing Azure Solutions with Azure Storage

Testing May Include	Course Content
Design Deployments	Module 2 - Comparing Database Options in Azure
Design Migrations	Module 2 - Comparing Database Options in Azure
Design a Site Recovery Strategy	Module 2 - Comparing Database Options in Azure
Design a Monitoring Strategy for the Data Platform	Module 2 - Comparing Database Options in Azure

Testing May Include	Course Content
Design an Auditing and Monitoring Strategy	Module 3 - Monitoring & Automating Azure Solutions
Design a Monitoring Strategy for Infrastructure	Module 3 - Monitoring & Automating Azure Solutions
Design a Data Archiving Strategy	Module 3 - Monitoring & Automating Azure Solutions
Design a Monitoring Strategy for the Data Platform	Module 3 - Monitoring & Automating Azure Solutions

### AZ-301.3: Designing for Deployment, Migration, and Integration

Testing May Include	Course Content
Gather Information on Existing Enterprise Architecture	Module 1 - Deploying Resources with Azure Resource Manager
Gather Non-Functional Requirements	Module 1 - Deploying Resources with Azure Resource Manager
Design Identity Management	Module 1 - Deploying Resources with Azure Resource Manager
Design Authentication	Module 1 - Deploying Resources with Azure Resource Manager
Design Authorization	Module 1 - Deploying Resources with Azure Resource Manager
Design a Monitoring Strategy for Identity and Security	Module 1 - Deploying Resources with Azure Resource Manager
Determine Feasibility and Refine Requirements	Module 1 - Deploying Resources with Azure Resource Manager

Testing May Include	Course Content
Design Migrations	Module 2 - Creating Managed Server Applications in Azure
Design an API Integration Strategy	Module 2 - Creating Managed Server Applications in Azure
Design a Compute Strategy	Module 2 - Creating Managed Server Applications in Azure
Design a Storage Strategy	Module 2 - Creating Managed Server Applications in Azure

Testing May Include	Course Content
Design an API Integration Strategy	Module 3 - Authoring Serverless Applications in Azure
Gather Information on Existing Enterprise Architecture	Module 3 - Authoring Serverless Applications in Azure
Optimize Consumption Strategy	Module 3 - Authoring Serverless Applications in Azure
Design and Document Data Flows	Module 3 - Authoring Serverless Applications in Azure
Gather Non-Functional Requirements	Module 3 - Authoring Serverless Applications in Azure

## AZ-301.4: Designing an Infrastructure Strategy

Testing May Include	Course Content
Gather Information on Existing Enterprise Architecture	Module 1 - Application Architecture Patterns in Azure
Gather Non-Functional Requirements	Module 1 - Application Architecture Patterns in Azure
Design Deployments	Module 1 - Application Architecture Patterns in Azure
Design Migrations	Module 1 - Application Architecture Patterns in Azure
Design an API Integration Strategy	Module 1 - Application Architecture Patterns in Azure

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Testing May Include	Course Content
Gather Information on Existing Enterprise Architecture	Module 2 - Building Azure IaaS-Based Server Application
Optimize Consumption Strategy	Module 2 - Building Azure IaaS-Based Server Application
Design for High Availability	Module 2 - Building Azure IaaS-Based Server Application
Design a Storage Strategy	Module 2 - Building Azure IaaS-Based Server Application
Design a Compute Strategy	Module 2 - Building Azure IaaS-Based Server Application
Design a Networking Strategy	Module 2 - Building Azure IaaS-Based Server Application

Testing May Include	Course Content
Optimize Consumption Strategy	Module 3 - Networking Azure Application Components
Design a Networking Strategy	Module 3 - Networking Azure Application Components
Design a Monitoring Strategy for Infrastructure	Module 3 - Networking Azure Application Components
Design Authentication	Module 3 - Networking Azure Application Components
Design for High Availability	Module 3 - Networking Azure Application Components

Testing May Include	Course Content
Optimize Consumption Strategy	Module 4 - Integrating Azure Solution Components Using Messaging Services
Design a Site Recovery Strategy	Module 4 - Integrating Azure Solution Components Using Messaging Services
Design an Auditing and Monitoring Strategy	Module 4 - Integrating Azure Solution Components Using Messaging Services
Design a Monitoring Strategy for Identity and Security	Module 4 - Integrating Azure Solution Components Using Messaging Services

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